PMI® Authorized PMP® Exam Prep Course

Version 3.2
Student Workbook

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Using this Student Workbook

Your instructor will cover a large volume of material in the training. This Student Workbook is designed to help you follow along, give you a space to take notes, and focus on some of the more detailed content your instructor may present.

The thumbnail images of the slides are placemarkers. Please view the slide detail on the PDF copies of the slides provided.

Please note: Like projects, your instructor's approach will be unique to them, so while this Student Workbook follows the course design, your instructor's sequence or emphasis may vary.

We have included resources from PMI.org and other relevant sources to further your understanding of the topics or contexts.

Good luck with your preparations.

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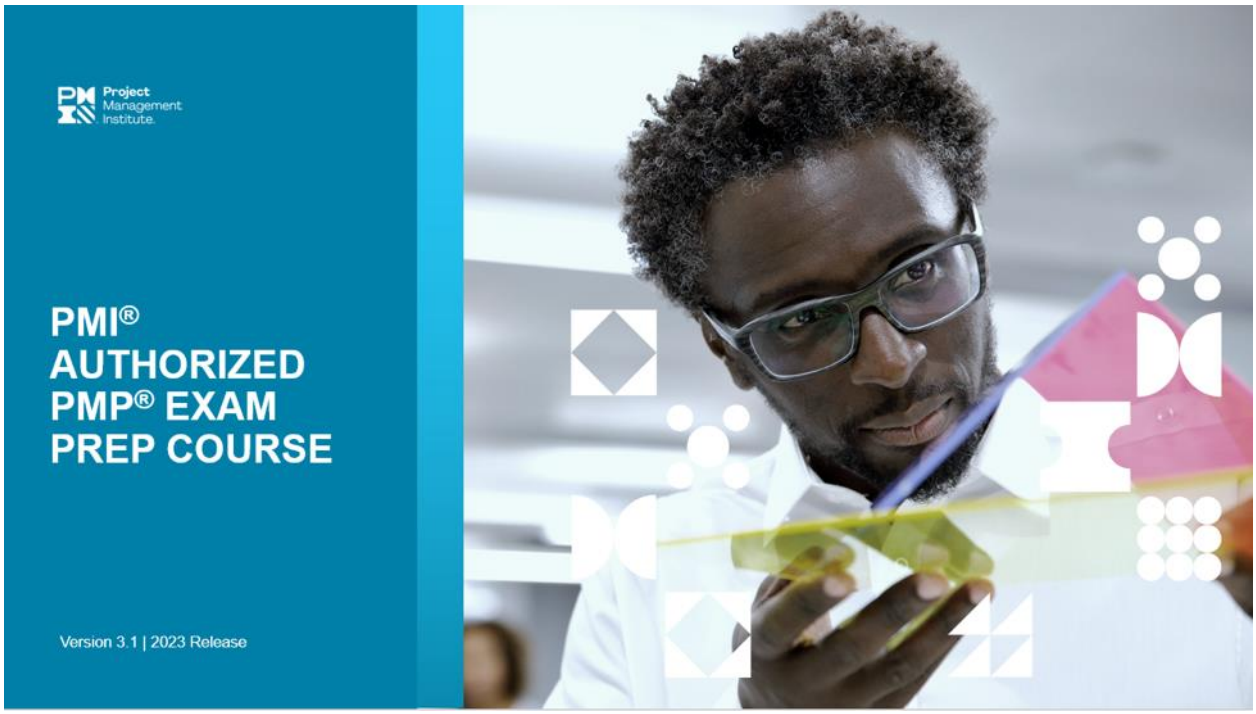
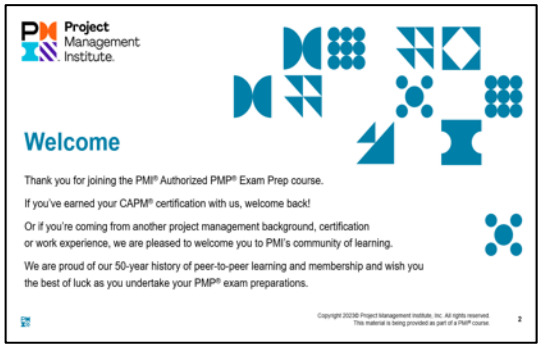
INTRODUCTION





Welcome

Welcome to the course! You'll learn a little more about the Project Management Institute and the PMP® in this short introduction.

This course enables you to further your project management skills, apply a formalized and standards-based approach to project management and prepare for the Project Management Institute (PMI®) Project Management Professional (PMP®) certification exam.

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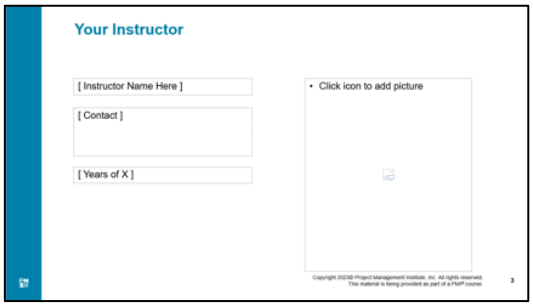

Your Instructor

Meet your instructor!

Participant Introductions

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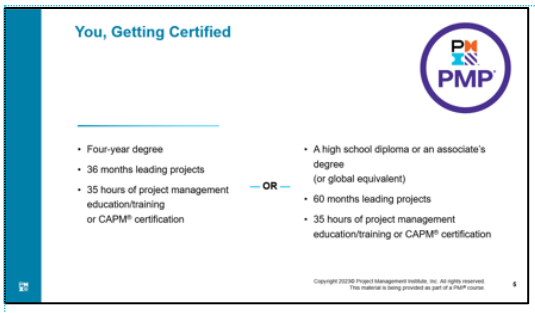

Your interactivity with this workbook will vary, depending on the PDF reader you are using. Blank areas are fillable fields, and you will find several tables in the workbook that you can fill in with notes. Also use the pen or highlighter feature on this document.

You, Getting Certified

This course is for individuals who:

- Have on-the-job project management experience, regardless of whether their formal job role is project manager
- Are not certified project management professionals; and
- Might or might not have received formal project management training.

To ensure success in this course, you should have experience with basic project management concepts and the requirements to apply to take the PMP certification exam.

This course fulfills the requirement of 35 hours of project management education/training.

- Four-year degree
- 36 months leading projects
- 35 hours of project management education/training
  or CAPM® certification

OR

- A high school diploma or an associate degree (or global equivalent)
- 60 months leading projects
- 35 hours of project management education/training or CAPM® certification

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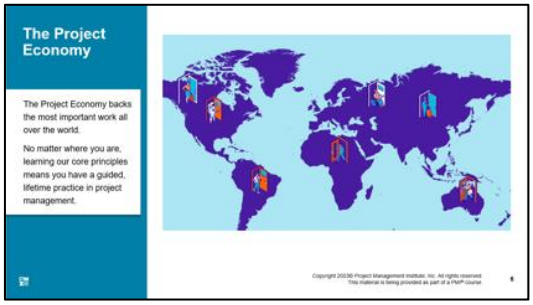

If your instructor does not also show the "Project Economy" video, you can view it at your leisure.

Both videos are accessible in the Logical Operations CHOICE dashboard, in case these links are inoperable.

To further explore the PDU requirements, you can access the Spotlight on Earning PDUs presentation from the Spotlight tile on the CHOICE Course screen.

The Project Economy

Video

2022 Jobs Report video (2m 33s)

The "Project Economy" video
Video (1m: 21s)

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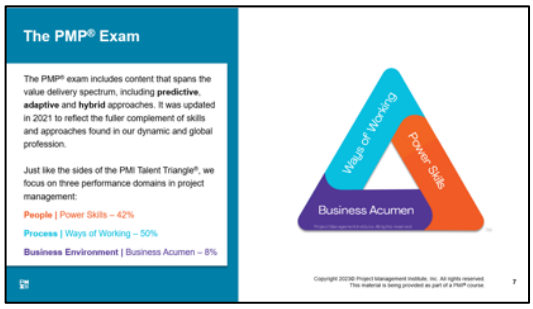
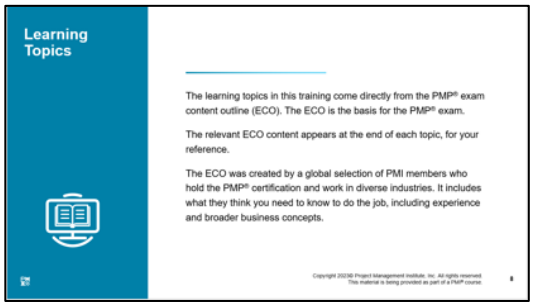


PMP® Certification web page

The PMP® Certification Exam

The PMP® exam includes content that spans the value delivery spectrum, including predictive, adaptive and hybrid approaches. It focuses on three performance domains in project management:

- **People** | Power Skills – 42%
- **Process** | Ways of Working – 50%
- **Business Environment** | Business Acumen – 8%



PMP Exam reference list, including ECO

Learning Topics

Exam topics and the topics in this course are based on the exam content outline (ECO) document.

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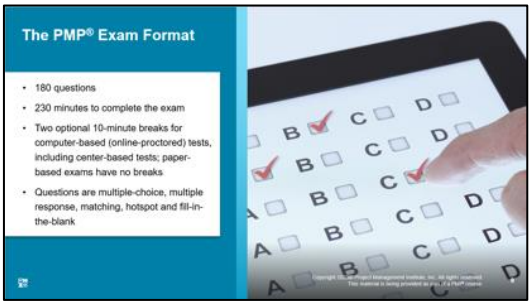

PMP® Certification web page

The PMP® Certification Exam Format

- 180 questions
- 230 minutes to complete the exam
- Two optional 10-minute breaks for computer-based (online-proctored) tests, including center-based tests; paper-based exams have no breaks
- Questions are multiple-choice, multiple response, matching, hotspot and fill-in-the-blank

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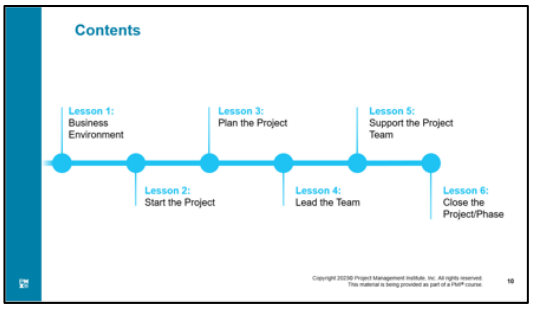

This slide depicts the content of the course. Over six lessons, we'll get you ready for the PMP® certification exam.

Contents

Lesson 1: Business Environment
Learn foundational project management, organizational and business concepts integral to your role.

Lesson 2: Start the Project
We'll discuss what you need to think about right at the start of a project, in the pre-planning stage – stakeholders, the team, and how to build shared understanding and decide how best to approach the project.

Lesson 3: Plan the Project
Here we go through the steps you'll take to plan scope, schedule, budget, resources, risks, and quality.

Lesson 4: Lead the Team
In this lesson, we focus on your leadership skills.

Lesson 5: Support Project Team Performance
How do you get the best performance from a project team? Here are the tools, techniques, and further leadership skills to help you do that.

Lesson 6: Close the Project/Phase
Finally, we discuss how and when to close a phase or project and the very important topic of benefits realization.

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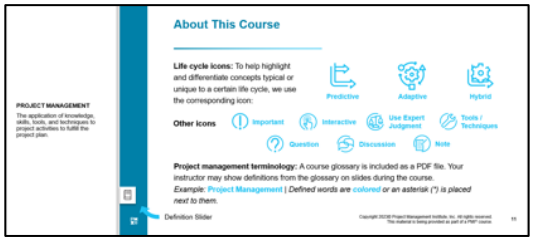

Some key terms appear on the training slides—the definition appears as a click-out on the left. However, if you missed it during class, don't worry! All the key terms in this course are in the glossary.

You'll find these icons throughout this Student Workbook, the Case Study — and on the training slides themselves. They label the action, tool, or characteristic described according to development approach.

Predictive icon
Arrows indicate driving work with a high degree of certainty forward

Adaptive icon
Circular trajectory of work or development regulated by intervals

Hybrid icon
A tailored combination of predictive and adaptive approaches

About This Course

We've included a glossary of terms that are important for understanding the PMI® approach to project management and which also addresses commonly known global project management and related business concepts and methods.

Glossary definitions have been sourced from PMI Standards and appropriate external sources; some have been tailored by our subject matter experts.

You will see the following icons throughout the slides and this workbook.

- Important
- Interactive
- Use Expert Judgment
- Tools/Techniques
- Question
- Discussion
- Note

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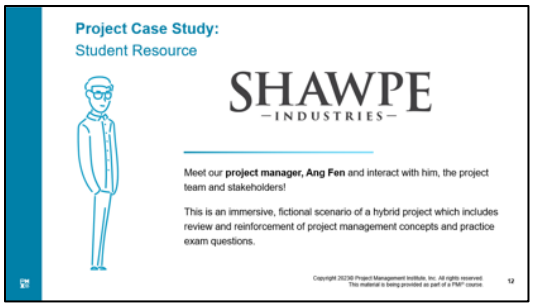

Read more about the case study on the next page!

Project Case Study: Student Resource

This course includes a self-study component that will help you visualize and review the concepts you learn from your instructor.

We follow Shawpe Industries, a medium-sized (150 employees) commercial real estate development company, as they undertake their most exciting project yet!

You will see some of the graphics and characters from the case study in the PowerPoint slides and in this Student Workbook.

- Duration: 2 hours
- This case study is self-scored and optional.

Let's Get to Work!

Make yourself comfortable.

Open the **student copy of the PowerPoint decks** on another screen or window and view the full-size versions alongside this document.

The slides are presented as thumbnails here for your visual reference and place marking.

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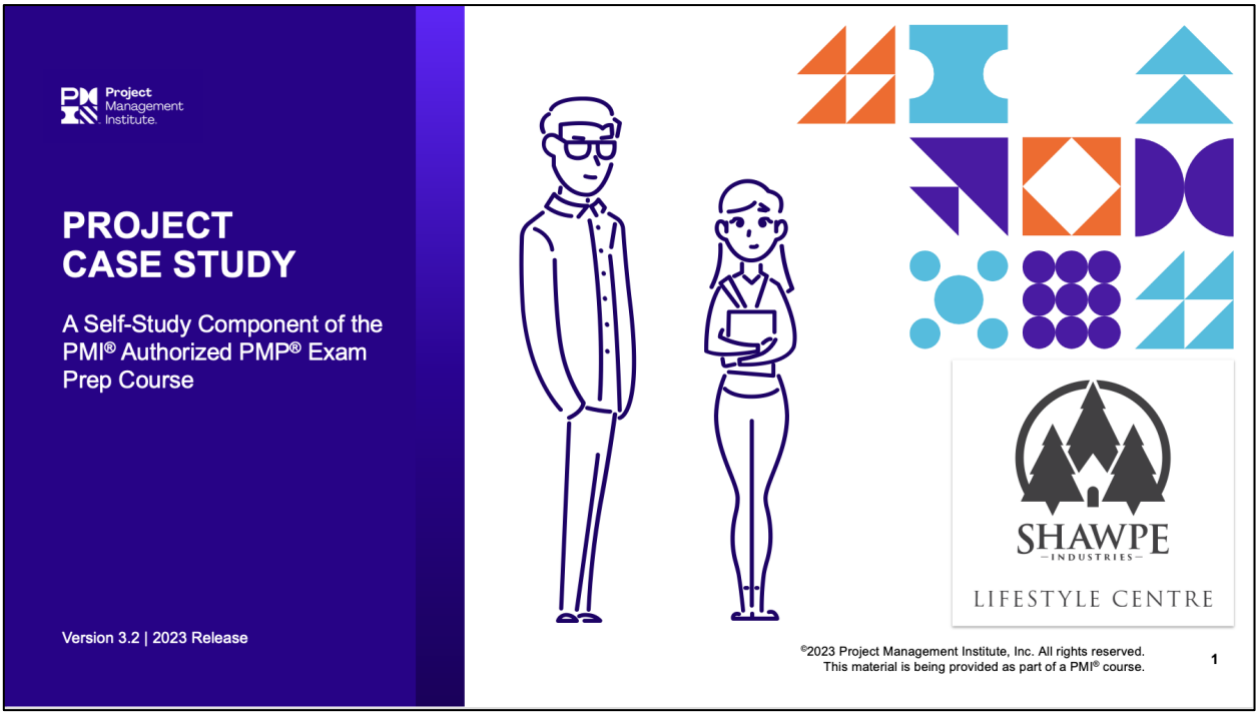
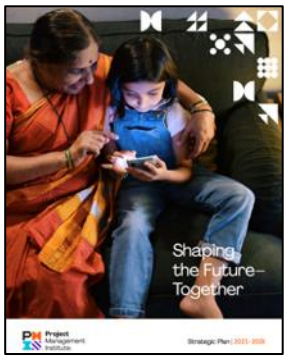
Shawpe Lifestyle Centre (SLC) Case Study



Work alongside a project manager, stakeholders, a product owner, and a project team! Through this case study, you'll learn more about project roles, leadership techniques, how teams use project management artifacts and, of course, project management practices—in a visual and practical way! The case study simulates the scenario-based question approach of the PMP® certification exam questions.



The SLC project is imagined and aligned with the vision and values in the PMI Strategic Plan – Shaping the Future - Together (2021-2025), which can be downloaded from PMI.org. As a formal introduction to the PMI community, we invite you to peruse it.

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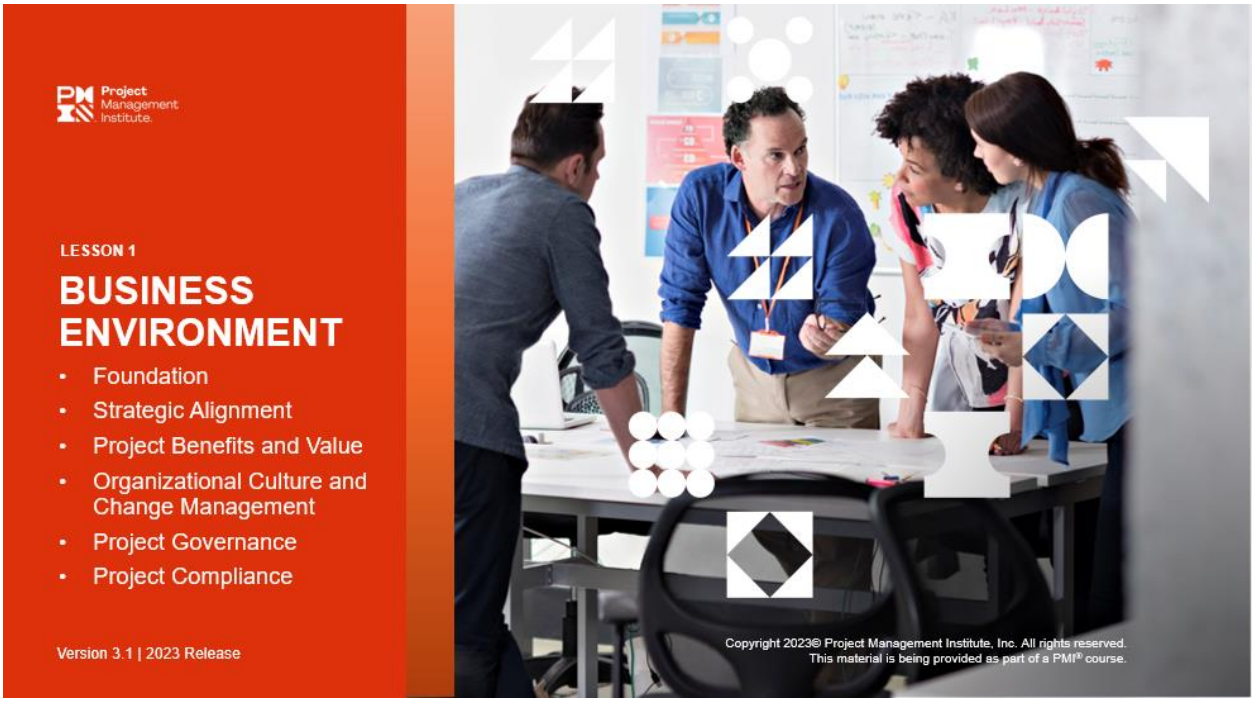
LESSON 1 | BUSINESS ENVIRONMENT



Description

This lesson addresses the concepts and business areas that you should understand before starting a project, supporting learning related to the “Business Environment” domain in the exam content outline (ECO) and the “Business Acumen” side of the PMI Talent Triangle.

Central to this lesson is determining the purpose and expectation for the project, as well as the parameters and expectations of the project within the business.

Having a sharp strategic business acumen and a good foundation in modern project management will enable you to quickly determine the purpose and expectation for a project.

While you will not be tested directly on the foundational concepts from any of the PMI Standards such as the Guide to the Project Management Body of Knowledge (PMBOK® Guide), you should understand the concepts in that standard as well as have familiarity with the PMI lexicon and frameworks.

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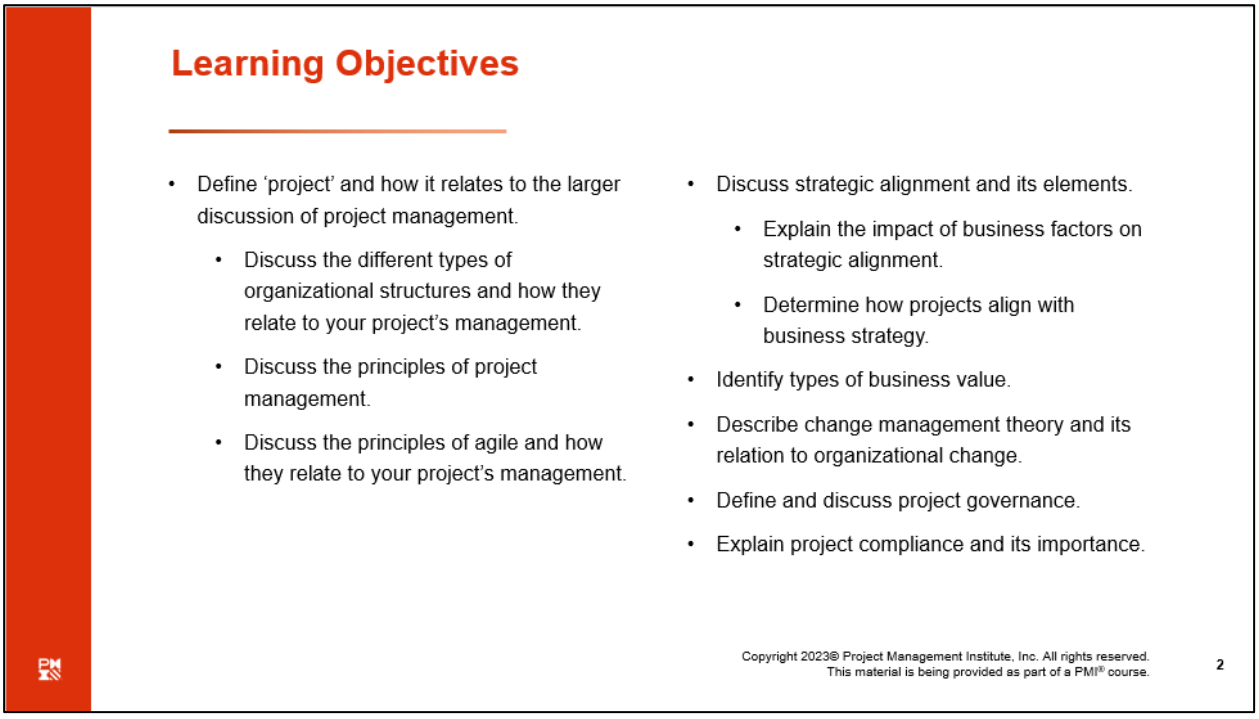
Topics

A. Foundation
B. Strategic alignment
C. Project benefits and value
D. Organizational culture and change management
E. Project governance
F. Project compliance

For each lesson, your instructor works with a set of learning objectives. This tells you what level and type of knowledge you should have in preparation for the exam.



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Lesson 1 Notes

TOPIC 1A | FOUNDATION

Topics Covered

- Foundational project management concepts
- Project management principles
- The Agile mindset
- Tailoring – hybrid approaches, processes, and practices in project management

Topic 1A: Foundation

This section covers the foundational concepts in project management, updated to include content from the 2021 publication of the *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* – Seventh Edition.

Project Management Professional (PMP)® certification candidates should not expect to be tested directly on some of these concepts from the Seventh Edition, but they should be aware that the exam content is built with an understanding of these concepts

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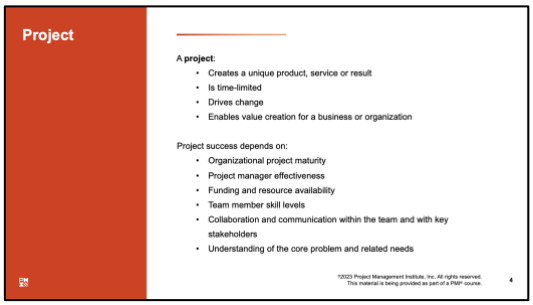

Project

A project:

Project success depends on:

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Further optional reading:

- *"What is project management?"*
- *"History of PMI"*

The Evolution of Project Management

Can you describe, in your own words, how project management has evolved?

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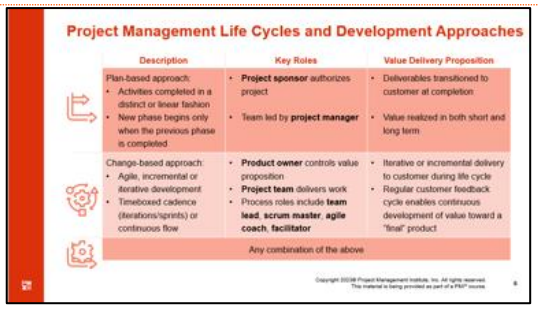

Project Management Life Cycles and Development Approaches

Take notes on this table!

	Description	Key Roles	Value Delivery Proposition
Predictive			
Adaptive			
Hybrid			

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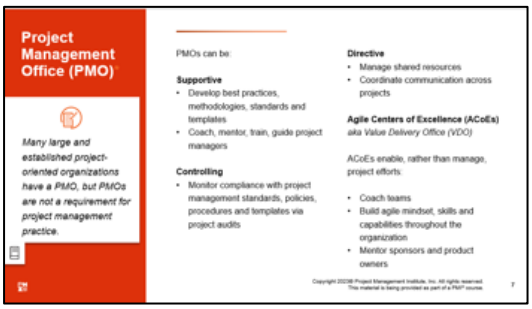

Project Management Office

General notes on PMOs:

Types of PMOs:

Supportive

Controlling

Directive

Agile Centers of Excellence (ACoEs)

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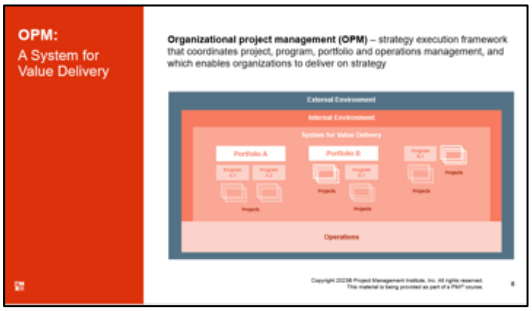

Organizational Project Management (OPM): A System for Value Delivery

- Identify relationships between projects, programs, and portfolios.
- Describe where and how projects reside, in relation to the business' operations and the internal and external environment.
- Explain how this **system** for value delivery works – i.e., systems interactions

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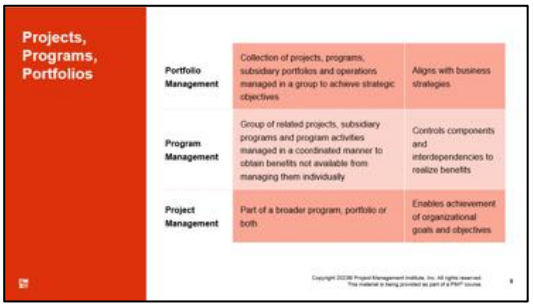

Projects, Programs and Portfolios

Do you understand how project management lines up with program and portfolio management within an OPM framework?

	Definition/Description	Purpose
Portfolio Management		
Program Management		
Project Management		

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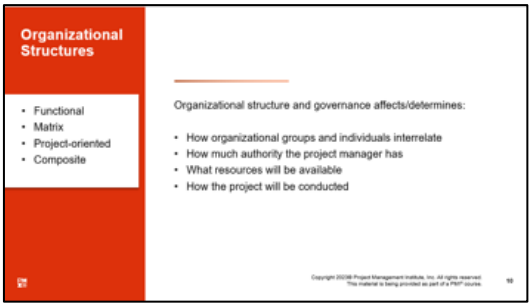

Organizational Structures

Four types:

_____ _____

_____ _____

Financial based structure and governance affects/determines:

- How organizational groups and individuals interrelate
- How much authority the project manager has
- What resources will be available
- How the project will be conducted

_____

_____

_____

_____

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Relative Authority in Organizational Structures

This slide helps you to better understand the project manager's role in various types of organizational structures. Take notes in the table, below.

The SLC case study uses the point of view of a project manager to explore the role further!

	Functional	Matrix	Project-oriented
Team member loyalty			
Team member reporting			
Project manager role			
Team member role			
Project manager's control over team members			

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Activity

Think of your current or a recent project. Can you identify the organizational structure type and describe how it affects your project in the following ways?

How organizational groups and individuals interrelate

_____

_____

_____

The project manager's authority

_____

_____

_____

Resource availability

_____

_____

_____

How the project is conducted

_____

_____

_____

_____

We suggest taking some time to reflect on the discussion points throughout the course, as they help toward providing a scenario-based context for learning topics. Remember that the PMP® certification exam questions are scenario based!

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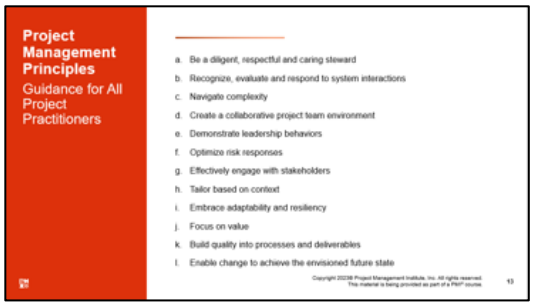

The principles are identified by letter on the slide for your instructor's use in referencing them later. However, the principles are not in any order of importance.

Further reading: The Standard for Project Management, pp. 21-60. (Inside the PMBOK® Guide – Seventh Edition)

Project Management Principles

- Be a diligent, respectful and caring steward
- Recognize, evaluate and respond to system interactions
- Navigate complexity
- Create a collaborative project team environment
- Demonstrate leadership behaviors
- Optimize risk responses
- Effectively engage with stakeholders
- Tailor based on context
- Embrace adaptability and resiliency
- Focus on value
- Build quality into processes and deliverables
- Enable change to achieve the envisioned future state

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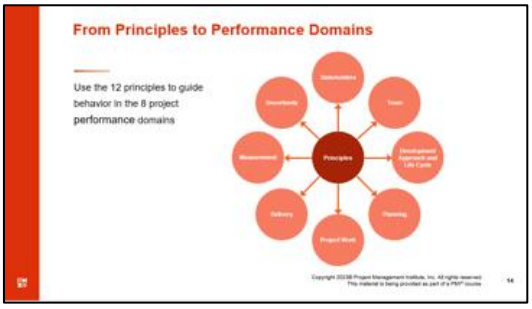

Further reading in the PMBOK® Guide – Seventh Edition, pp. 7-129.

From Principles to Performance Domains

The 8 project performance domains are:

- Stakeholders
- Team
- Development approach and life cycle
- Planning
- Project work
- Delivery
- Measurement
- Uncertainty

A project performance domain is a group of related activities that are critical for the effective delivery of project outcomes.

Collectively, the performance domains represent a project management system of interactive, interrelated, and interdependent management capabilities that work in unison to achieve desired project outcomes.

As the performance domains interact and react to each other, change occurs.

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Agile

What is agile? Describe it as best you can and then take note of the definition in the glossary.

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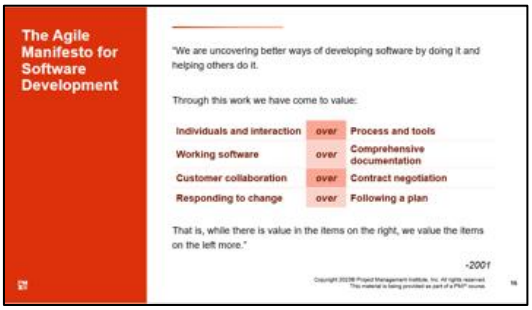

Reference and copyright:

https://agilemanifesto.org

The Agile Manifesto for Software Development

What are the four values from the Agile Manifesto?

_____

_____

_____

_____

How do these values guide agile practice?

_____

_____

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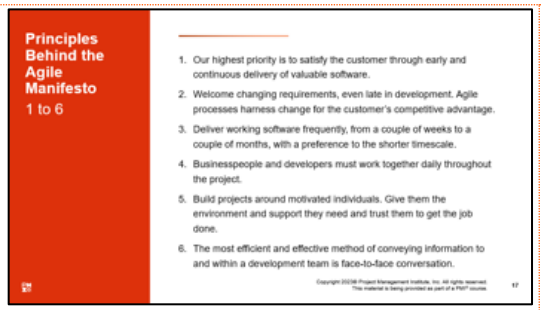

Principles Behind the Agile Manifesto: 1-6

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Businesspeople and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.

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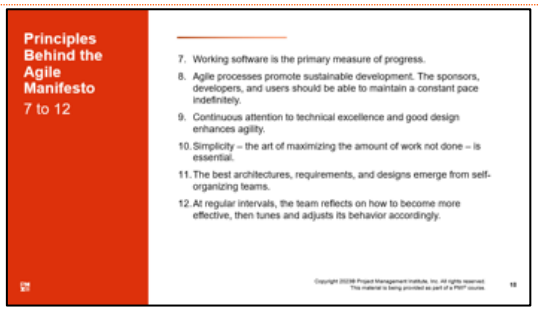

Principles Behind the Agile Manifesto: 7-12

7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity – the art of maximizing the amount of work not done – is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

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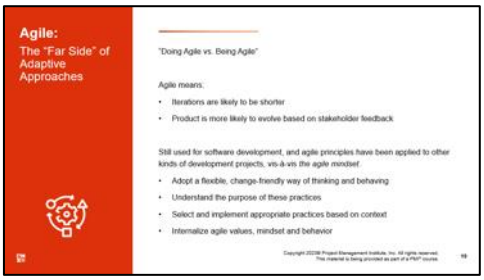


Agile: The "Far Side" of Adaptive Approaches

What's the difference between "doing agile and being agile?"

_____

_____

In general, agile means:

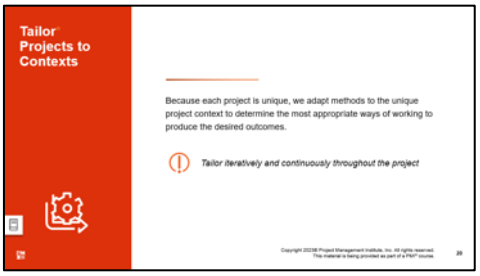
_____

_____

Explain how agile software development principles are applied to other kinds of development projects, vis-à-vis *the agile mindset*:

_____

_____



Tailor Projects to Contexts

Define 'tailoring' and describe how it is done:

_____

_____

_____

_____

_____

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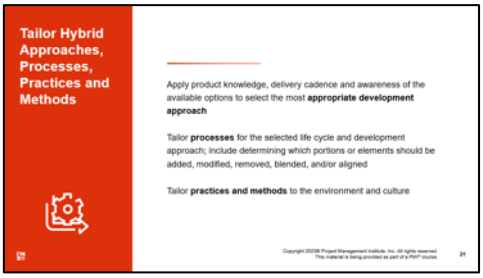


Tailor Hybrid Approaches, Practices, and Methods

Notes on what we mean by 'hybrid' in project management:

_____

_____

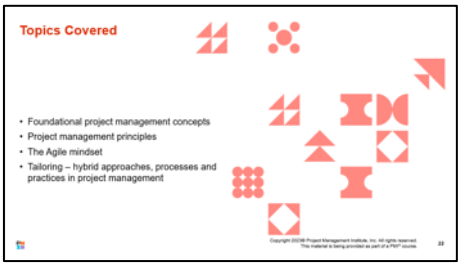
_____

_____

Relationship between hybrid and tailoring:

_____

_____



End of Topic 1A

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TOPIC 1B | STRATEGIC ALIGNMENT

Topics Covered

- Define strategic alignment and business acumen
- Follow guidelines for effective business decision-making
- Explore organizational influences on projects
- Explain how projects align with broader organizational strategy and global trends

Topic 1B: Strategic Alignment

Professionals at all levels need to be able to cultivate effective decision-making skills and understand how their projects align with the big picture of broader organizational strategy and global trends.

And because today's projects demand a broad set of skills and capabilities, PMI will continue to focus on giving you the tools and insights you need to develop new skills and tackle your next project challenge.

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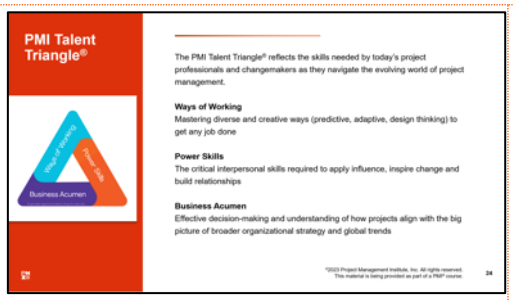

PMI Talent Triangle®

Take notes on:

- Way of Working
- Business Acumen
- Power Skills

_____

_____

_____ _____

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Further information

"PMI Talent Triangle®"

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Identify any gaps in your knowledge and plans for how to fill them:

Strategic Alignment and Business Management Skills

Reflect on these questions and skill sets for project professionals.

Do you:

- Know your organization’s strategic plan?
- Understand how project goals matter to an organization's long-term vision and mission?
- See a high-level overview of the organization?
- Have a working knowledge of business functions?
- Have pertinent product and industry expertise?

Can you:

- Explain the essential business aspects of a project?
- Work with SMEs and a sponsor to develop an appropriate project delivery strategy?
- Implement strategy to maximize the business value of a project?

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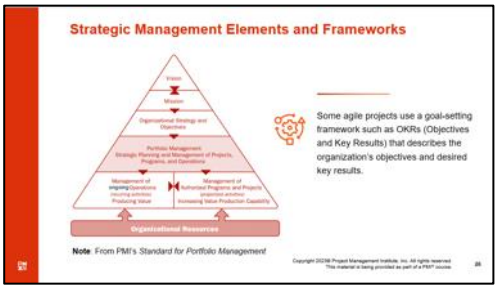

Strategic Management Elements and Frameworks

- **Vision:** Where the business wants to go (aspirational)
- **Mission:** Its pre-established objective or purpose
- **Objectives:** Defined areas of pursuance
- **Goals:** Milestones, resources
- **Strategies:** Resources used to accomplish organizational purpose
- Programs/projects
- Operation procedures (SOPs)

Note: From PMI's *Standard for Portfolio Management*

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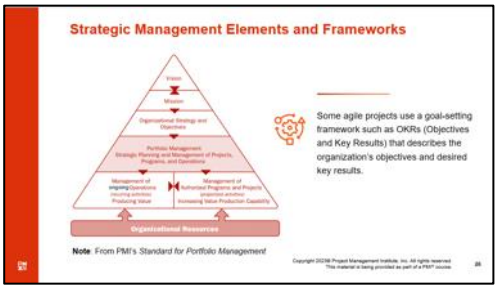

Organizational Influences

Define and describe Enterprise Environmental Factors (EEFs)

_____

_____

_____

Define and describe Organizational Process Assets (OPAs)

_____

_____

_____

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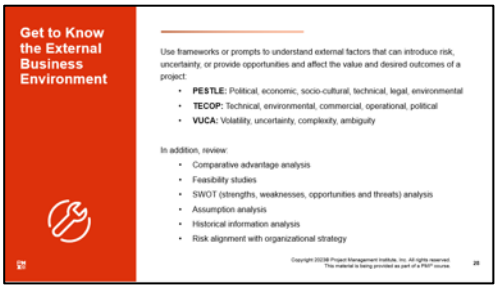

Use frameworks or prompts to understand external factors that can introduce risk, uncertainty or provide opportunities and affect the value and desired outcomes of a project.

Get to Know the External Business Environment

PESTLE is an acronym for:

_____

_____

TECOP is an acronym for:

_____

_____

VUCA is an acronym for:

_____

_____

What are other tools used to understand the external business environment? Include any your instructor mentions or that you know.

_____

_____

_____

_____

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Internal Business Environment Factors

Organizational changes can dramatically impact

_____

_____

Which project roles need to be familiar with business plans, reorganizations, process changes and other internal activities?

_____

_____

Internal business changes might cause:

_____

_____

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OPAs and EEFs

OPAs

Examples of processes, policies, and procedures:

_____

_____

Examples of organizational knowledge bases:

_____

_____

EEFs

Examples of **internal** EEFs:

_____

_____

Examples of **external** EEFs:

_____

_____

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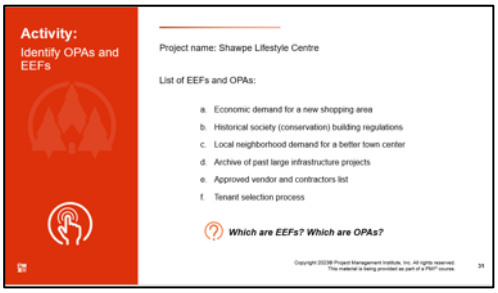


Activity: Identify OPAs and EEFs

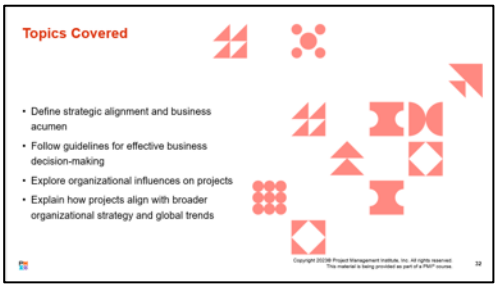
a. Economic demand for a new shopping area
b. Historical society (conservation) building regulations
c. Local neighborhood demand for a better town center
d. Archive of past large infrastructure projects
e. Approved vendor and contractors list
f. Tenant selection process

Which are OPAs and which are EEFs?

_____

_____

_____



End of Topic 1B

_____

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TOPIC 1C | PROJECT BENEFITS AND VALUE

ECO Coverage

3.2 Evaluate and deliver project benefits and value
- Investigate that benefits are identified (3.2.1)
- Evaluate delivery options to deliver value (3.2.4)

2.1 Execute project with the urgency required to deliver business value
- Assess opportunities to deliver value incrementally (2.1.1)

Topic 1C: Project Benefits and Value

Project managers need to think strategically and ensure that project results provide the expected outcomes (benefits and values) to the organization.

These benefits and values should be understood at the beginning of the project, reassessed throughout the project effort, and validated at the end of the project – even though in many cases the actual determination of the benefit will not be apparent until long after the project has been completed.

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Business Value

Define business value

_____

_____

_____

Describe how projects deliver business value:

_____

_____

_____

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Examine Business Value

How do project professionals examine business value?

_____

_____

_____

Where in the business should you look to understand how a project delivers value?

_____

_____

_____

Types of Business Value

Describe each of these types of business value; think of an example of each.

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Financial gain

New customers

Social benefit

First to market

Improvement (technological, process, etc.)

Alignment or compliance with standards or regulations

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Needs Assessment: Obtain Data for the Project

Who usually performs a needs assessment?

_____

_____

What kind of data does a needs assessment include?

_____

_____

_____

How does a needs assessment help to direct a project?

_____

_____

_____

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Business Documents: Business Case and Benefits Management Plan

What does the business case establish?

What should the benefits management plan include?

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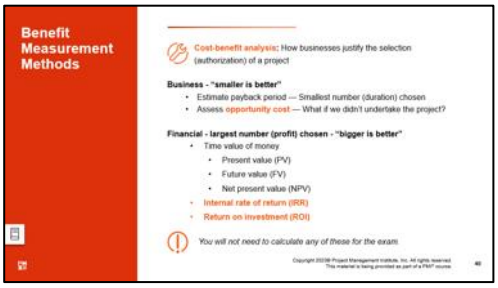

Though you won't need to do these calculations on the exam, you should know that for business-based benefit measurement methods, "smaller is better" and for financial-based benefit measurement methods, "bigger is better."

Benefit Measurement Methods

Business-based

- Estimate payback period:

_____

- Assess opportunity cost:

_____

Financial-based

- Cost-benefit analysis

_____

- Opportunity cost

_____

- Internal rate of return (IRR)

_____

- Return on investment (ROI)

_____

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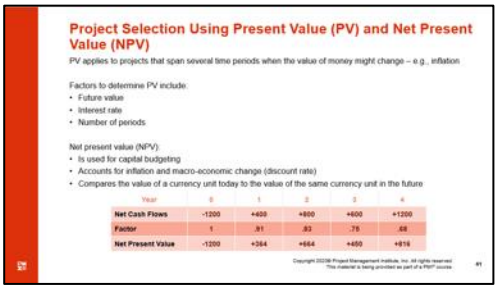

Project Selection Using Present Value (PV) and Net Present Value (NPV)

Ensure that you understand how estimates change for multi-year projects (PV) and how the formulas are used to select projects.

Factors to determine PV include:

_____

_____

_____

_____

NPV – definition and description of use

_____

_____

_____

_____

This information is normally provided to the project manager by the financial organization. You will not need to calculate this for the exam.

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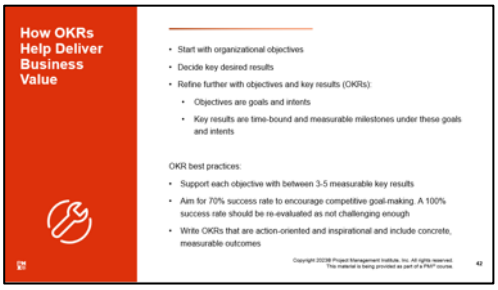

Optional further reading on this topic:
"Strategic Planning and Lean Portfolio Management"

How OKRs Help Deliver Business Value

Define OKR

_____

_____

_____

_____

OKR best practices:

_____

_____

_____

_____

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Incremental Value Delivery

What is incremental value delivery?

_____

_____

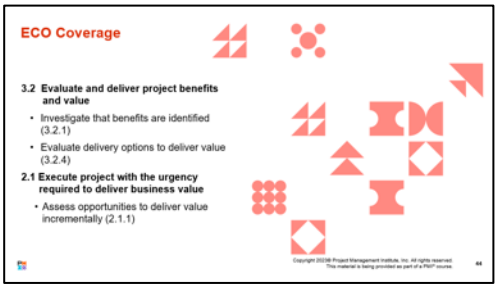
_____

Benefits of an incremental development approach include:

_____

_____

_____



End of Topic 1C

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TOPIC 1D | ORGANIZATIONAL CULTURE AND CHANGE MANAGEMENT

ECO Coverage

3.4 Support organizational change
- Assess organizational culture (3.4.1)
- Evaluate impact of organization change to project, and determine required actions (3.4.2)
- Evaluate impact of the project to the organization and determine required actions (3.4.3)

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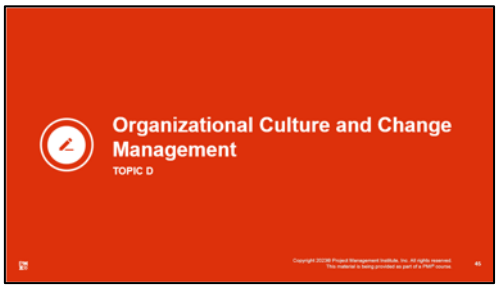

PMI calls this the systems approach to project management. It includes an understanding of change management. However, this is NOT the same as change control management.

Topic 1D: Organizational Culture and Change Management

Projects create and deliver change, and change is often the catalyst for the authorization of a project. Arguably, change is the single biggest factor in business decisions.

Envisioning your project as part of the organization in which it "lives" means being part of any change initiative that the organization takes. This will mean adapting your project as well as realigning it with the changing business objectives.

In addition, it is important to understand how organizations typically work, then consider a few different project management setups, and finally how project managers and PMOs roll out and support change initiatives in organizations.

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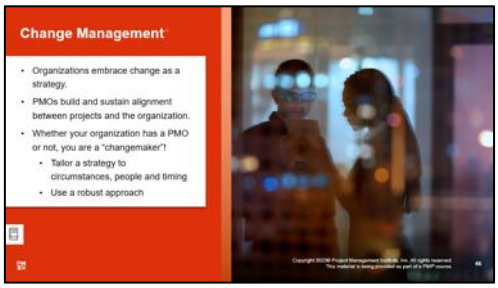

Change Management

Definition and description:

_____

_____

_____

_____

_____

*This is **not** the change control management topic.*

Further reading: PMBOK® Guide – Seventh Edition, section X3.3

How does organizational culture affect change and change management?

_____

_____

_____

_____

_____

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Manage Organizational Change Impacts on Projects

Further reading:

[Managing Change in Organizations: A Practice Guide (2013)] - (Requires PMI membership for login)

Get to Know Organizational Cultures and Styles

- View of leadership, hierarchy, and authority
- Shared vision, beliefs, and expectations
- Diversity, equity, and inclusion practices
- Risk tolerance
- Regulations, policies, and procedures
- Code of conduct
- Operating environments
- Motivation and reward systems

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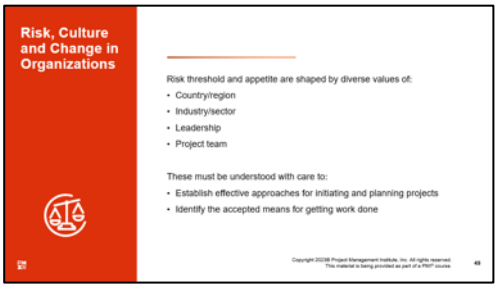

Risk, Culture and Change in Organizations

Risk threshold and appetite are shaped by diverse values of:

- Country/region
- Industry/sector
- Leadership
- Project team

Describe how understanding risk, culture and change helps organizations:

_____

_____

_____

_____

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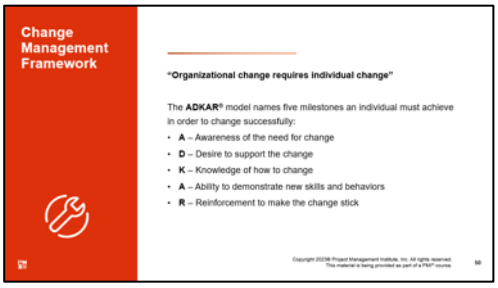

Change Management Framework

Describe the ADKAR® change management framework:

_____

_____

_____

_____

_____

Did your instructor mention / do you know of any others?

_____

_____

_____

_____

_____

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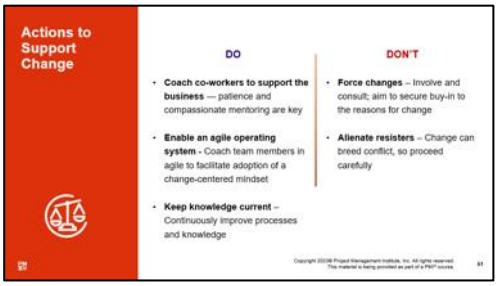

Actions to Support Change

DO:	DON'T:

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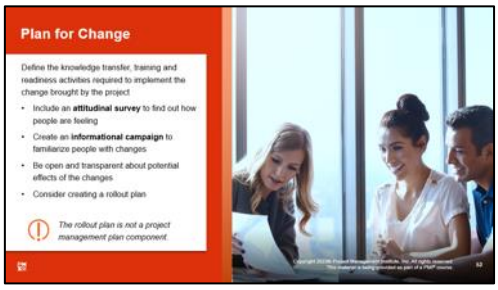

Plan for Change

_____

_____

_____

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_____

PMI's resources on change management

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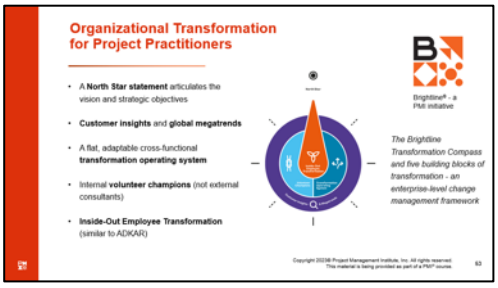

Learn more about
the Organizational Transformation course for PMP® certification holders here (Foundation level)

Organizational Transformation for Project Practitioners

Five Building Blocks for organizational transformation:

- North Star statement
- Customer insights and global megatrends
- Transformation operating system
- Internal volunteer champions
- Inside-Out Employee Transformation

Brightline® Compass

Organizational transformation, aka an enterprise-level change management framework requires:

_____

_____

_____

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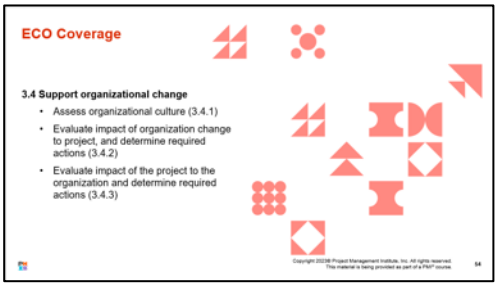

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TOPIC 1E | PROJECT GOVERNANCE

ECO Coverage

2.14 Establish project governance structure

- Determine appropriate governance for a project (e.g., replicate organization governance) (2.14.1)
- Define escalation paths and thresholds (2.14.2)

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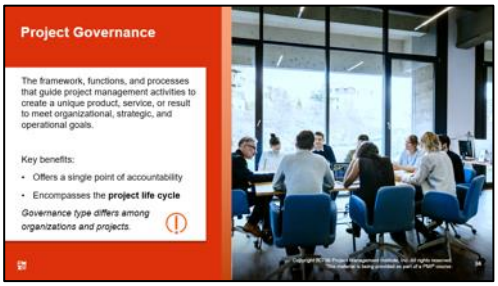


Project Governance

Take note of the definition and benefits:

_____

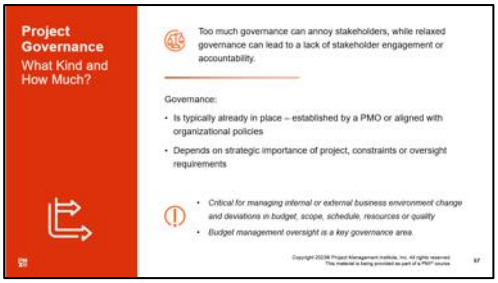
_____

_____

_____

_____

Further reading on this topic in the *PMBOK® Guide* – Seventh Edition, Section 2.2 Organizational Governance Systems



Project Governance: What Kind and How Much?

Guidelines for project manager or project team include:

_____

_____

_____

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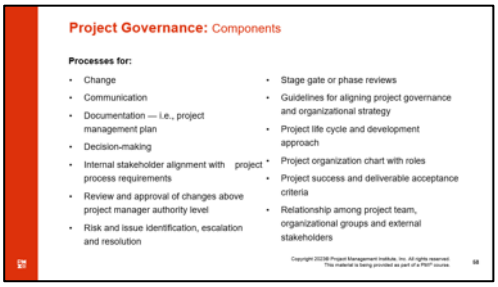

Project Governance Components

Processes for:

- Change
- Communication
- Documentation — i.e., project management plan
- Decision-making
- Internal stakeholder alignment with project process requirements
- Review and approval of changes above project manager authority level
- Risk and issue identification, escalation, and resolution
- Stage gate or phase reviews
- Guidelines for aligning project governance and organizational strategy
- Project life cycle and development approach
- Project organization chart with roles
- Project success and deliverable acceptance criteria
- Relationship among project team, organizational groups, and external stakeholders

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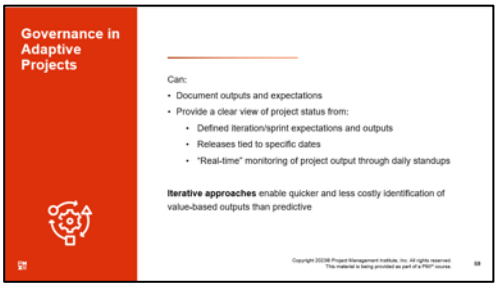

Governance in Adaptive Projects

How is governance handled in adaptive projects?

Governance Board (aka Project Board or Steering Committee)

Describe what a project governance board does:

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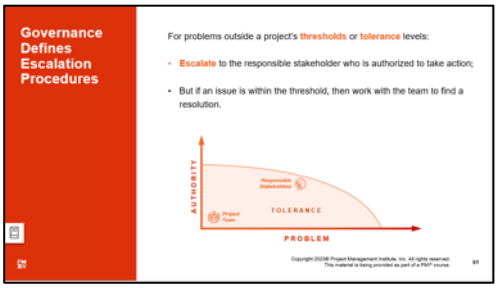
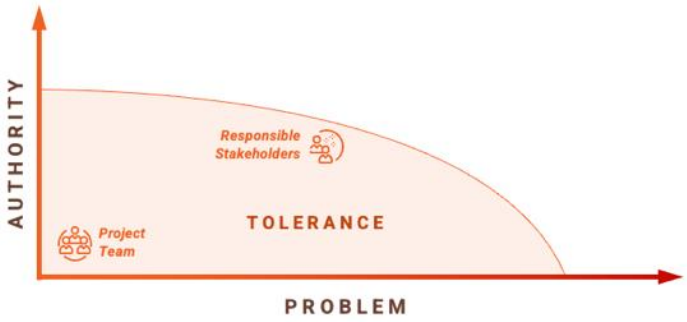


Governance Defines Escalation Procedures



Threshold (Define and indicate where this is on the graphic.)

_____

_____

_____

Tolerance

_____

_____

_____

Escalate

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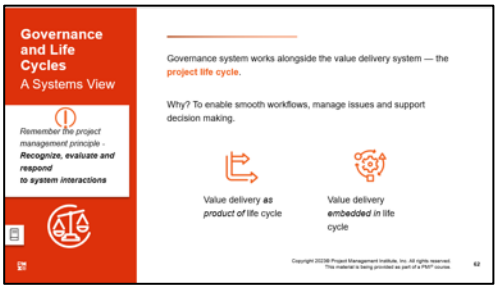

Governance and Life Cycles: A Systems View

Project life cycle definition:

_____

_____

_____

How does governance differ according to life cycle?

Predictive:

_____

_____

_____

Adaptive:

_____

_____

_____

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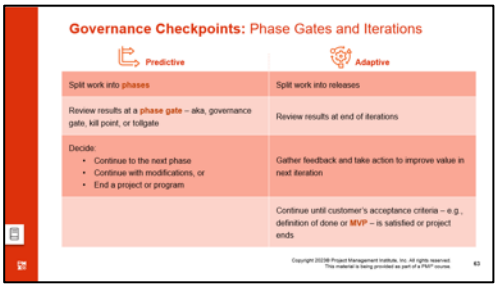

Governance Checkpoints: Phase Gates and Iterations

Phase

Phase Gate

Minimum Viable Product (MVP)

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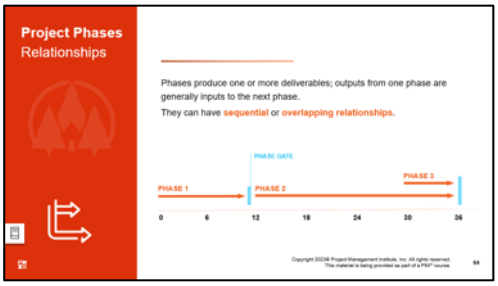
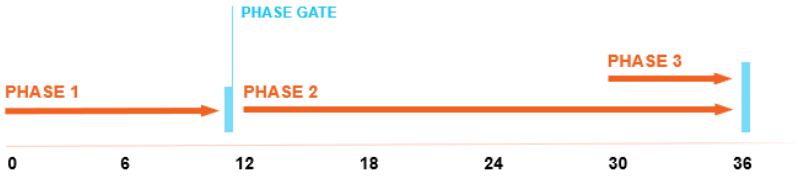


Project Phases: Relationships



Sequential:

Overlapping:

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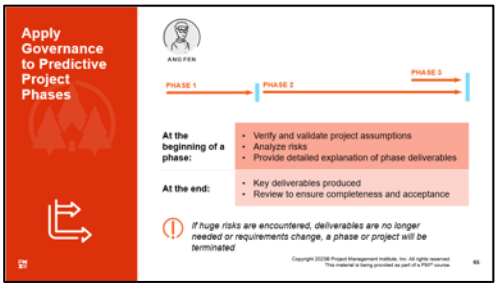


Apply Governance to Predictive Project Phases

What do you need to do at the beginning of a phase?

_____

_____

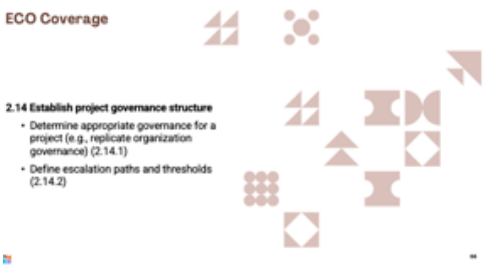
_____

And at the end?

_____

_____

_____



End of Topic 1E

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TOPIC 1F | PROJECT COMPLIANCE

ECO Coverage

3.1 Plan and manage project compliance

- Confirm project compliance requirements (e.g., security, health and safety, regulatory compliance (3.1.1)
- Classify compliance categories (3.1.2)
- Analyze the consequences of non-compliance (3.1.5)

Larger, organizational-level compliance issues are discussed here. How to plan for compliance is discussed in Lesson 5, topic G, “Quality.”

Topic 1F: Project Compliance

•

Compliance requirements must be understood and prioritized as the most important to deliver for a project.

Risk of noncompliance is one of the most serious threats to a project.

During a project, compliance requirements may change. The onus is on the project team to be aware and proactive about compliance.

This is part of your stewardship of a project — that is the responsibility you undertake to care for the health of the project you lead; Stewardship is one of the project management principles named and discussed earlier in this lesson.

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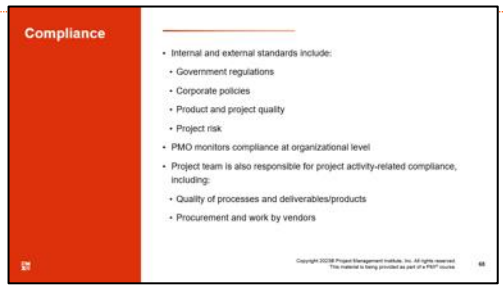

Compliance

Include internal / external standards such as:

_____

_____

_____

_____

Roles / responsibilities:

_____

_____

_____

Compliance Requirements

Legal or regulatory constraints include:

_____

_____

_____

Quality-related:

_____

_____

_____

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Why do we classify compliance matters? What problem does that help to solve?

Compliance Categories Classification

- Environmental risks
- Workplace health and safety
- Ethical/non-corrupt practices
- Social responsibility
- Quality
- Process risks

_____

_____

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Categories vary based on:

_____

_____

_____

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Compliance Threats: How to Investigate

Guidelines or questions to ask:

_____

_____

_____

What is a quality policy?

_____

_____

_____

_____

Treat Compliance as a Project Objective

Explain why compliance is so important to project health:

_____

_____

_____

Actions to take include:

_____

_____

_____

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Compliance: Five Best Practices

Activity: Think About Compliance

- Does your organization have a quality policy?
- Do you know where to find the quality policy or standards for your projects?
- What kinds of compliance activities are you involved with?

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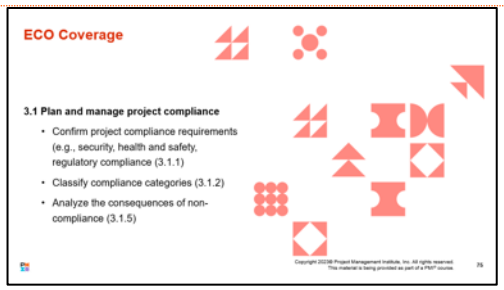

End of Topic 1F

End of Lesson 1

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Lesson 2: Start the Project

Description

Lesson 2 includes topics in the “People” and “Process” domains of the ECO, but covers knowledge related to all three sides of the Talent Triangle – e.g., exploration of project team and stakeholder roles and tailoring development approaches to a project so that it delivers value for the business.

Let’s review the concepts and processes related to starting a project!

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Learning Objectives

- Define and discuss stakeholders and the most effective ways to communicate with them.
- Explain the best ways to form a team.
- Describe how to build the most effective understanding of a project and how doing so relates to executing a project successfully.
- Explain how predictive and adaptive project life cycles work; explain what a hybrid development approach is.
  - Decide which kind of development approach or life cycle is best suited for work.

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2

Topics

A. Identify and engage stakeholders
B. Form the team
C. Build shared understanding
D. Determine project approach

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Lesson 2 Notes

TOPIC 2A | IDENTIFY AND ENGAGE STAKEHOLDERS

ECO Coverage

1.9 Collaborate with stakeholders
- Evaluate engagement needs for stakeholders (1.9.1)

2.4 Engage stakeholders
- Analyze stakeholders (power interest grid, influence, impact) (2.4.1)
- Categorize stakeholders (2.4.2)
- Develop, execute, and validate a strategy for stakeholder engagement (2.4.4)

2.2 Manage communications
- Analyze communication needs of all stakeholders (2.2.1)
- Determine communication methods, channels, frequency, and level of detail for all stakeholders (2.2.2)

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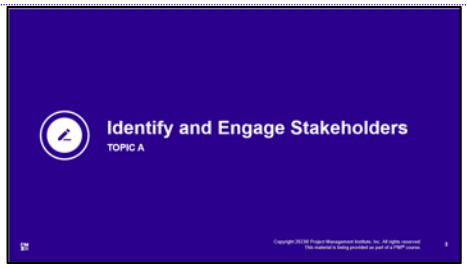

Topic 2A: Identify and Engage Stakeholders

Start projects with the stakeholders in mind, establish effective relationships and communication with them and maintain a focus on what the project means for them individually (or as a group).

You will spend a lot of time communicating with stakeholders, so good relationships are essential. In this topic, we explore how to identify and engage project stakeholders. In Lesson 4 of this course, we return to the topic of stakeholder management to discuss how to best communicate and collaborate with stakeholders on the project.

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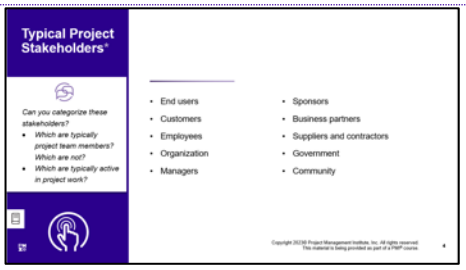

Typical Project Stakeholders

End users	Sponsors
Customers	Business partners
Employees	Suppliers and
Organization	contractors
Managers	Government
	Community

Which are typically team members? Which are not?

_____

_____

_____

_____

Which are typically active in project work?

_____

_____

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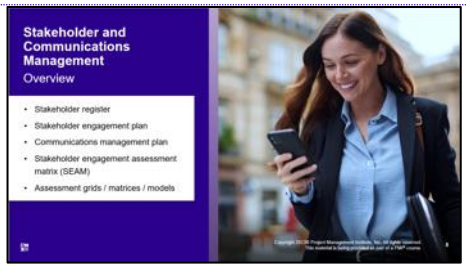

Stakeholder and Communications Management

How do you find out who the stakeholders are?

_____

_____

_____

_____

_____

_____

How do you determine their relationship to the project?

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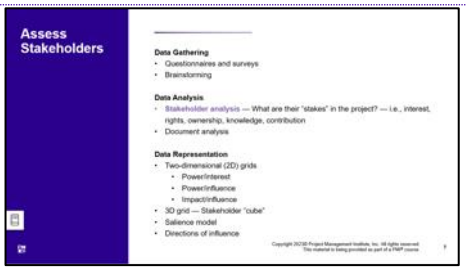

Assess Stakeholders

Stakeholder analysis tools/techniques

_____

_____

_____

_____

Data gathering tools/ techniques

_____

_____

_____

Data analysis tools/ techniques

_____

_____

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Data representation tools/ techniques

_____

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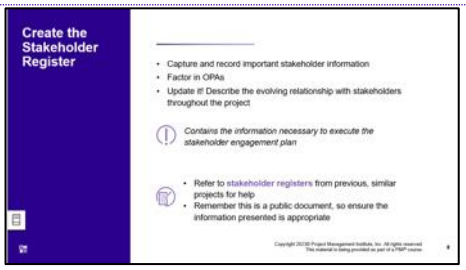

Create the Stakeholder Register

Stakeholder register definition

_____

_____

_____

Stakeholder Register

	Name	Title	Internal / External	Project Role	Major Requirements	Expectations	Influence / Attitude
1	Eugene Lowe	CEO	Internal	Sponsor	Successful completion	On-time completion, successful partnerships	Champion
2	Oasestown Municipality		External	Government partner (liaison); funding contributor; owner of SLC site	Successful completion of facility and partnership;	Accountability	Supporter
3	Kara Black	Principal, Oases Architects	External	Partner, designer, specialist knowledge (conservation building)	Clear design brief, successful partnership	Fluid funding and communication, design autonomy	Champion
4	Josie Bynoe	Chair, BOD	Internal	Direct strategic local partnerships for Shawpe	Environmental sustainability of project work; "moral rights"	No damage to Oasestown conservation district or environs	Resistor
5	Helen Grey	Lead, business development	Internal	Product owner	High profile tenants, excellent community and conservation credentials	Organizational learning; leadership opportunity	Neutral
6	Hasan Persaud	VP of Business Development	Internal	Portfolio owner	Capacity for ongoing revenue	End-user in Phase 3	Neutral
7	Mandeep Chahal	VP of Finance	Internal	Budget controller	direct contact with funding partners	clear data	Neutral
8	Kei Leung	VP of Marketing	Internal	Marketing expert	elevation of brand	high quality tenants	Supporter
9	Tenants		External	Income source	bespoke spaces	high quality	Neutral
10	Contractors		External	Vendors - building	clear instructions, contract		Neutral
11	Oasestown local residents		External	Neighbors to project	Traffic and noise pollution management	no inconveniences	Resistor
12	Oasestown Community Partnership		External	Community group operating in Oasestown	none	a free space in the SLC	Champion

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This stakeholder register example is from the Shawpe project case study.

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Find and examine the following in the stakeholder register:

Profile information:

- **Name or organization:** Stakeholders can be individuals or entities
- **Title:** Their functional position in the organization or elsewhere
- **Project Role:** Position on the project
- **Major Requirements:** Which of the project requirements this stakeholder is concerned with.
- **Internal/External:** Is their role inside the company or not?
- **Communication type:** What is their preferred method/frequency of communication?

Assessment information:

- **Expectations:** Take note of their expectations of the project. You will have learned this during an interview, for example.
- **Influence/Attitude:** What degree of impact can this stakeholder have on the project? Use descriptive terms and ensure everyone understands what the terms mean.

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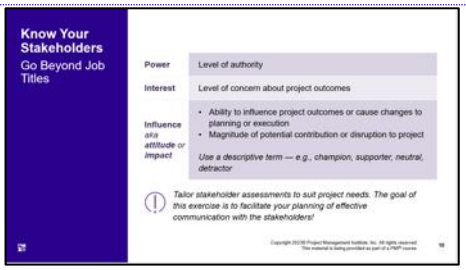

Know Your Stakeholders: Go Beyond Job Titles

_____

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Power	
Interest	
Influence (attitude or impact)	

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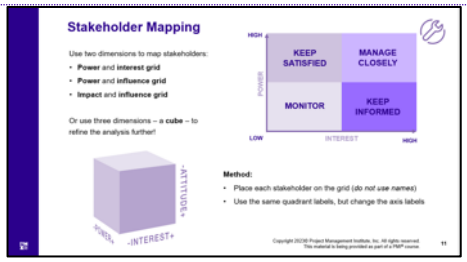
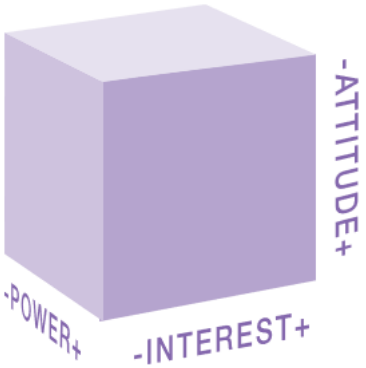
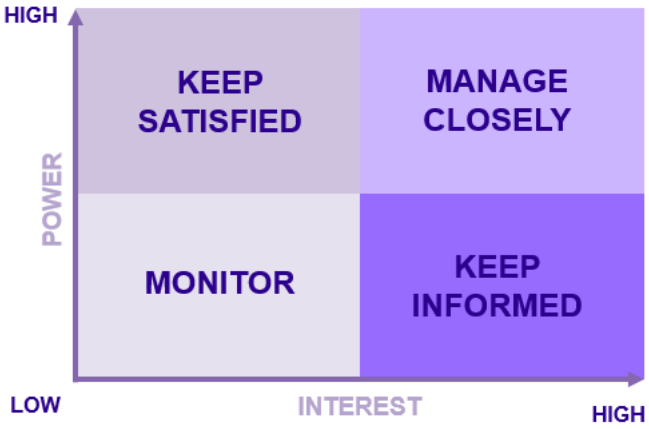


Stakeholder Mapping





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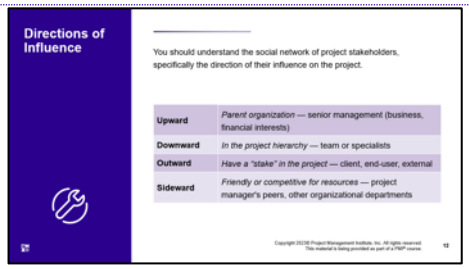

Directions of Influence

	Definition	Example
Upward		
Downward		
Outward		
Sideward		

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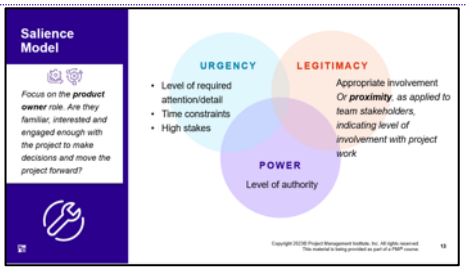

Salience Model

Define and explain the categories used:

_____

_____

_____

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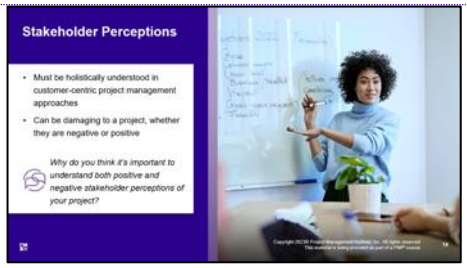

Stakeholder Perceptions

Why do you think it's important to understand both positive and negative stakeholder perceptions of your project?

_____

_____

_____

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Capture Stakeholder Feedback Perceptions

Leadership tools and techniques include:

_____

_____

_____

Approaches for key stakeholders

_____

_____

_____

Approaches for all stakeholders

_____

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Approaches for large and public groups

_____

_____

_____

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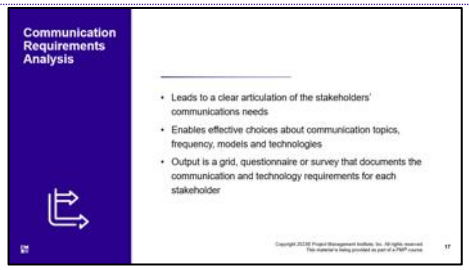
Plan to Communicate with Stakeholders

Stakeholder engagement plan

Communications management plan



Communication Requirements Analysis

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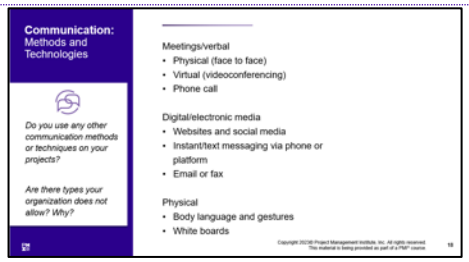

Communication Methods and Technologies

Note examples and best uses!

Meetings/verbal

_____

_____

_____

_____

Digital/electronic media

_____

_____

_____

_____

Physical

_____

_____

_____

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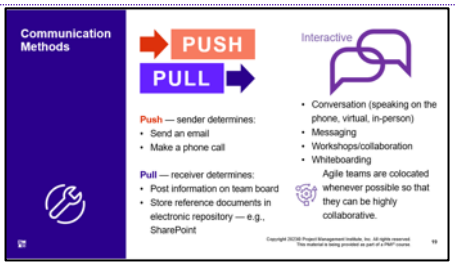

Communications Methods

Push

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Pull

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Interactive communication

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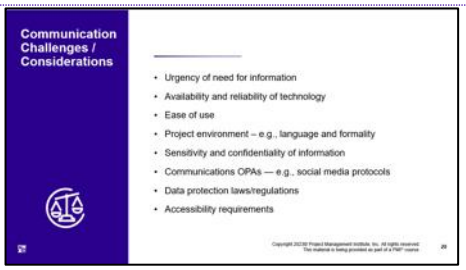

Communications Challenges/Considerations

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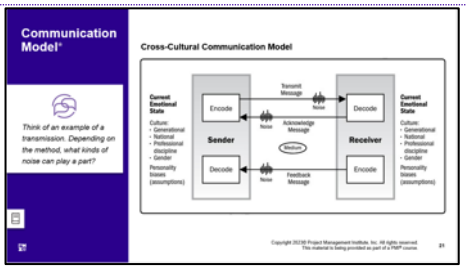

Communication Model

Take notes on the components and dynamics here:

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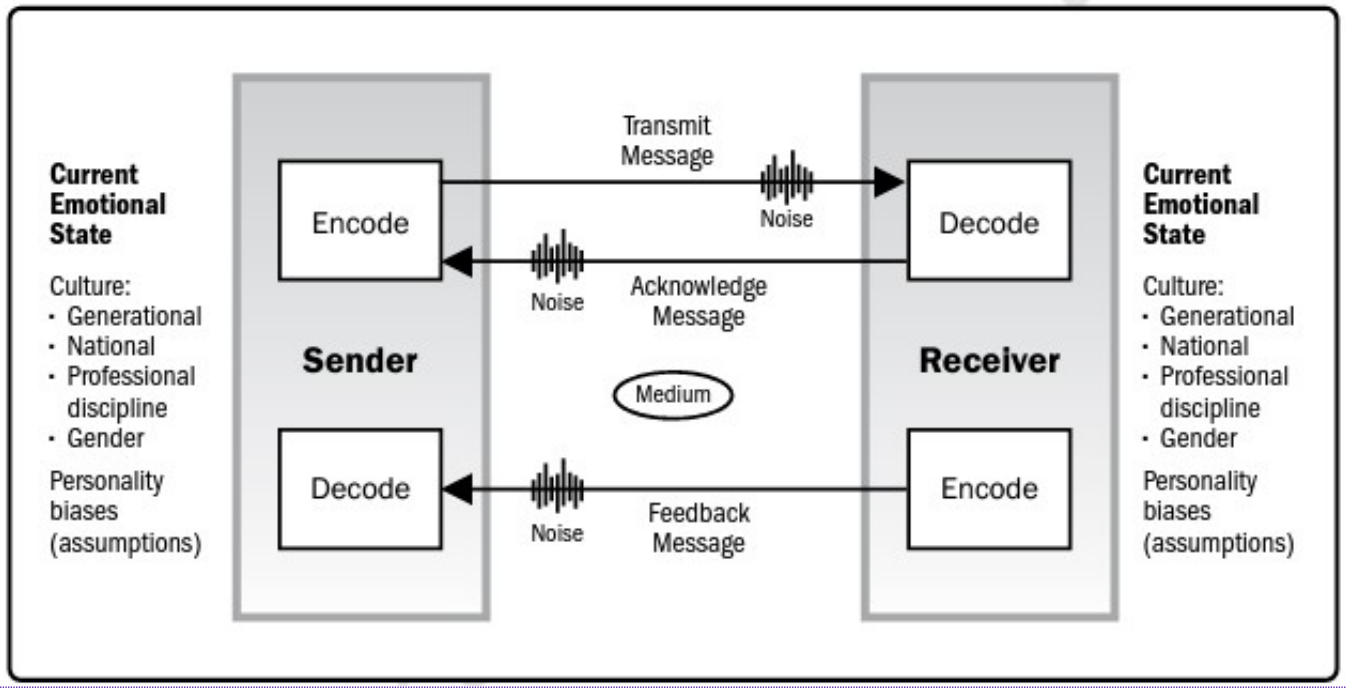

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Communication terms:

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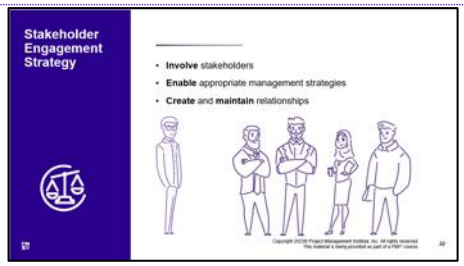
_____

Think of an example of a transmission. Depending on the method, what kinds of noise can play a part?

_____

_____



Stakeholder Engagement Strategy

What is your typical strategy for stakeholder engagement?

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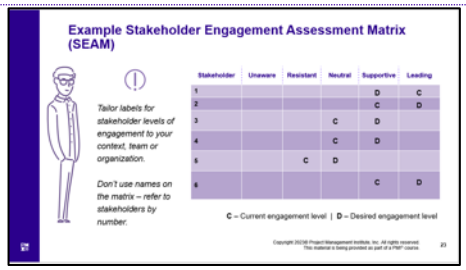


Stakeholder Engagement Assessment Matrix (SEAM)

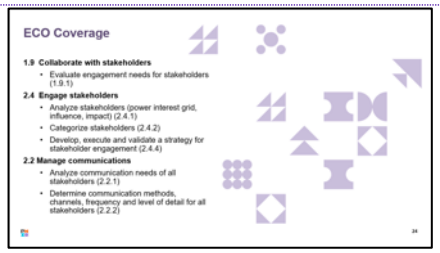
Take note of the categories and designations for the SEAM.

_____

_____

_____

_____



End of Topic 2A

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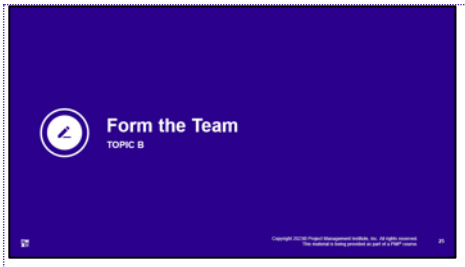
TOPIC 2B | FORM THE TEAM

ECO Coverage

1.4 Empower team members and stakeholders
- Organize around team strengths (1.4.1)

2.16 Ensure knowledge transfer for project continuity
- Discuss project responsibilities within team (2.16.1)
- Outline expectations for working environment (2.16.2)

1.11 Engage and support virtual teams
- Examine virtual team member needs (e.g., environment, geography, culture, global, etc.) (1.11.1)
- Investigate alternatives (e.g., communication tools, colocation) for virtual team member engagement (1.11.2)



Many of the leadership elements of team formation are discussed in Lesson 4, Lead the Team.

Topic 2B: Form the Team

Team formation is the next topic we'll explore.

This section provides guidance for the early stages of team formation, including how to prepare and what to expect.

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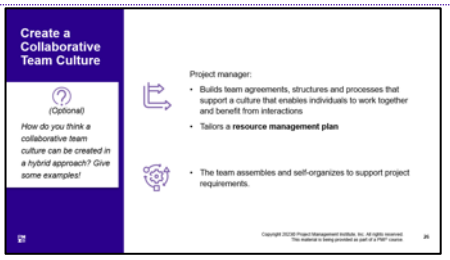

Create A Collaborative Team Culture

Project manager responsibility:

_____

_____

_____

_____

How do you think a collaborative team culture can be created in a hybrid approach? Give some examples!

_____

_____

_____

_____

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This video and all the others are accessible from your LO CHOICE dashboard!

Project Team Formation Video

Video

Project team formation is the subject of Dr Bruce Tuckman's ladder model.

What are the five stages?

_____

_____

_____

_____

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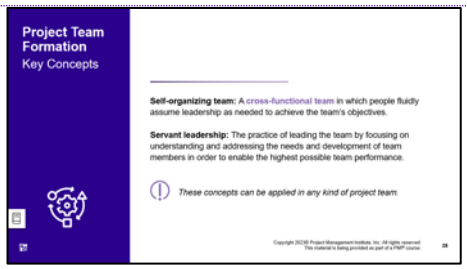


Project Team Formation: Key Concepts

Cross-functional team

_____

_____

Self-organizing team

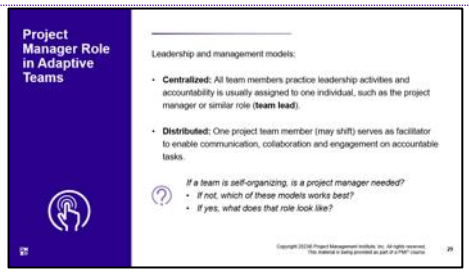
_____

_____

Servant leadership

_____

_____



Project Manager Role in Adaptive Teams

Leadership and management roles. _____

_____

_____

Centralized: _____

_____

_____

Distributed: _____

_____

_____

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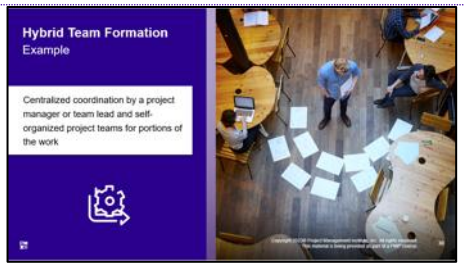
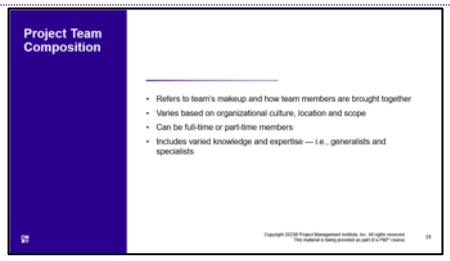


Hybrid Team Formation

Examples/benefits:



Project Team Composition

Project Team Roles

What are the roles and what does each one do?

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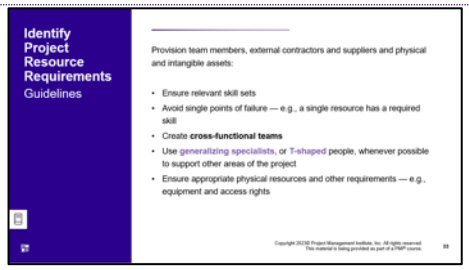

Identify Project Resource Requirements: Guidelines

Generalizing Specialists

T-shaped

T-Shaped People and Self-Organizing Teams

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Diversity, Equity, and Inclusion Standards

Define DE & I:

_____

_____

_____

_____

What is the DE & I context of your organization or region?

_____

_____

_____

Experts and Expert Judgement

_____

_____

_____

People from other areas of the organization

_____

_____

_____

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Focus on Team Strengths

_____

_____

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How can a SWOT Analysis help project professionals to focus on team strengths:

_____

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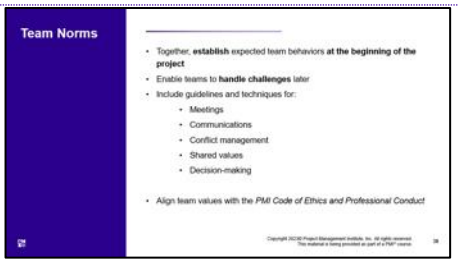

Team Norms

_____

_____

_____

PMI® Code of Ethics and Professional Conduct

Can you remember the four values that drive ethical conduct for the project management profession?

_____

_____

_____

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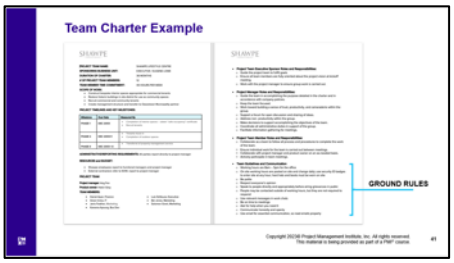

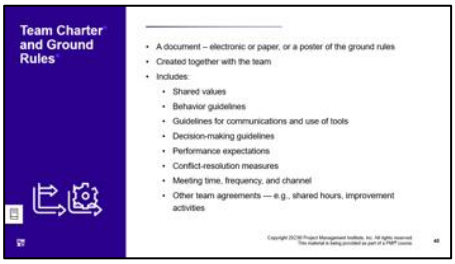

Team Charter and Ground Rules

Team charter

_____

_____

Ground rules

_____

_____

You can enlarge this document for inspection in the Shawpe project case study PowerPoint file (slide 31)

SHAWPE
INDUSTRIES

PROJECT TEAM NAME: SHAWPE LIFESTYLE CENTRE
SPONSORING BUSINESS UNIT: EXECUTIVE / EUGENE LOWE
DURATION OF CHARTER: 36 MONTHS
 # OF PROJECT TEAM MEMBERS: 12
TEAM MEMBER TIME COMMITMENT: 40 HOURS PER WEEK

SCOPE OF WORK:

- Construct bespoke interior spaces appropriate for commercial tenants
- Restore historic buildings in site district for use as community spaces
- Recruit commercial and community tenants
- Create management structure and transfer to Oasestown Municipality partner

PROJECT TIMELINES AND KEY MILESTONES:

Milestone	Due Date	Measured By
PHASE 1	DEC 20XX	• Completion of interior spaces – obtain "safe occupancy" certificate • Recruit tenants
PHASE 2	DEC 20XX+1	• Tenants move in • Completion of outdoor spaces
PHASE 3	DEC 20XX +2	• Transferral of property management service

ADMINISTRATIVE/REPORTING REQUIREMENTS: All parties report directly to project manager

RESOURCES and BUDGET:

- Shawpe employees report to functional managers and project manager
- External contractors refer to SOW, report to project manager

PROJECT TEAM

Project manager: Ang Fen
Product owner: Helen Grey
TEAM MEMBERS:

- Daniel Ayan, Finance
- Greer Inniss, IT
- Janis Feather, Marketing
- Kareena Ayoung, Bus Dev
- Luis DeSouza, Executive
- Bei Jones, Marketing
- Solomon Grant, Marketing

SHAWPE
INDUSTRIES

- **Project Team Executive Sponsor Roles and Responsibilities:**
  - Guide the project team to fulfill goals
  - Ensure all team members are fully oriented about the project vision at kickoff meeting.
  - Work with the project manager to ensure group work is carried out.
- **Project Manager Roles and Responsibilities:**
  - Guide the team in accomplishing the purpose detailed in the charter and in accordance with company policies.
  - Keep the team focused.
  - Work toward building a sense of trust, productivity, and camaraderie within the group.
  - Support a forum for open discussion and sharing of ideas.
  - Address non- productivity within the group.
  - Make decisions to support accomplishing the objectives of the team.
  - Coordinate all administrative duties in support of the group.
  - Facilitate information gathering for meetings.
- **Project Team Member Roles and Responsibilities:**
  - Collaborate as a team to follow all process and procedures to complete the work of the team.
  - Ensure individual work for the team is carried out between meetings.
  - Collaborate with project manager and product owner on an as-needed basis.
  - Actively participate in team meetings.
- **Team Guidelines and Communication**
  - Working hours are 8am – 5pm for the office
  - On site working hours are posted on site and change daily; use security ID badges to enter site at any hour; hard hats and boots must be worn on site
  - Be polite
  - Respect everyone's opinion
  - Speak to people directly and appropriately before airing grievances in public
  - People may be contacted outside of working hours, but they are not required to respond
  - Use relevant messages in work chats
  - Be on time to meetings
  - Ask for help when you need it
  - Communicate honestly and openly
  - Use email for essential communication, so read emails properly

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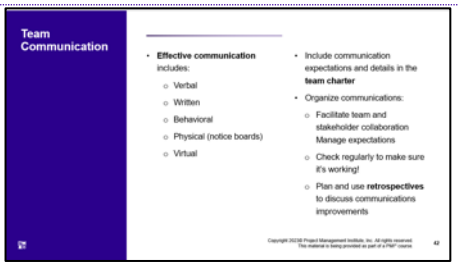

Team Communication

Effective communication includes:

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Organize communications:

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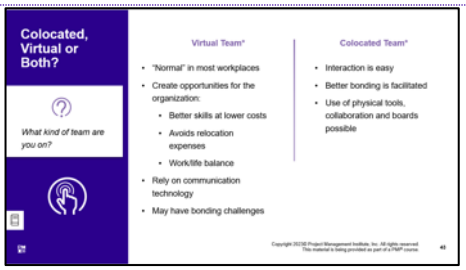

Colocated, Virtual or Both?

Advantages of colocated teams:

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_____

_____

Advantages of virtual teams:

_____

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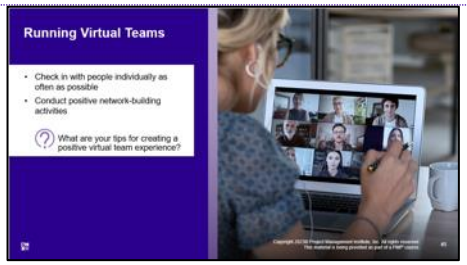
Virtual Team Challenges



Running Virtual Teams

What are your tips for creating a positive virtual team experience?

Virtual Team Communication Technology

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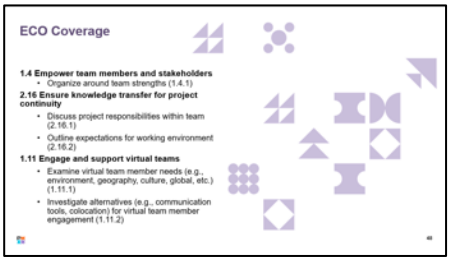
Address Virtual Team Member Needs



End of Topic 2B

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TOPIC 2C | BUILD SHARED UNDERSTANDING

ECO Coverage

1.2 Lead a team
- Set a clear vision and mission (1.2.1)

1.8 Negotiate project agreements
- Analyze the bounds of the negotiation for agreement (1.8.1)
- Assess priorities and determine ultimate objective(s) (1.8.2)
- Participate in agreement negotiations (1.8.4)
- Determine a negotiation strategy (1.8.5)

1.10 Build shared understanding
- Survey all necessary parties to reach consensus (1.10.2)
- Support outcome of parties' agreement (1.10.3)

1.12 Define team ground rules
- Communicate organizational principles with team and external stakeholders (1.12.1)
- Establish an environment that fosters adherence to ground rules (1.12.2)

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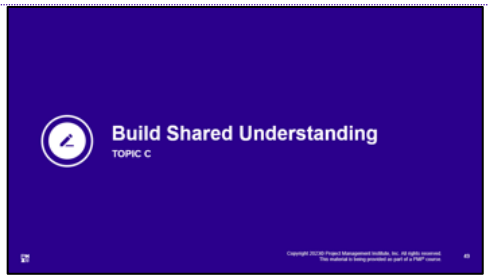


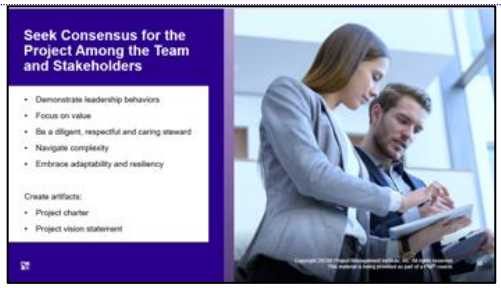
Topic 2C: Build Shared Understanding

One of the first goals in starting a project is to ensure that all team members and stakeholders have a common understanding of the objectives of the project, as well as an understanding of any agreements, such as contracts or statements of work that initiated the project.

You must also enable the team to understand the importance of the project and the alignment to the organization's strategic objectives.

Again, the focus is on creating that collaborative team environment, but the stakes are highest in this period. As much as possible, you need to make sure everyone is aligned before work starts.

If you get the team in a good place from the start, then keeping them motivated and inspired to do their best work will be easier in the weeks ahead!



Seek Consensus for the Project Among the Team and Stakeholders

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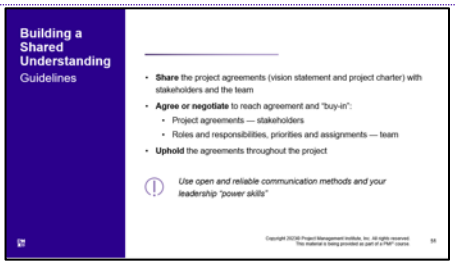

Building a Shared Understanding: Guidelines

Stewardship:

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Share project agreements and negotiate to ensure buy-in:

_____

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Uphold project agreements:

_____

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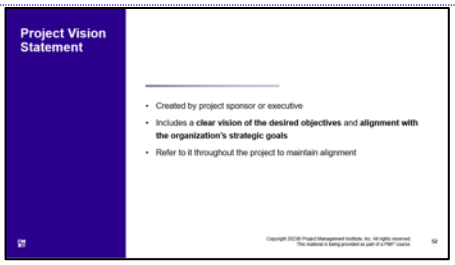

Project Vision Statement

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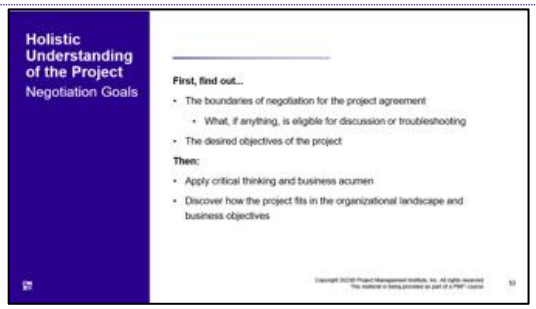

Holistic Understanding of the Project: Negotiation Goals

First, find out:

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_____

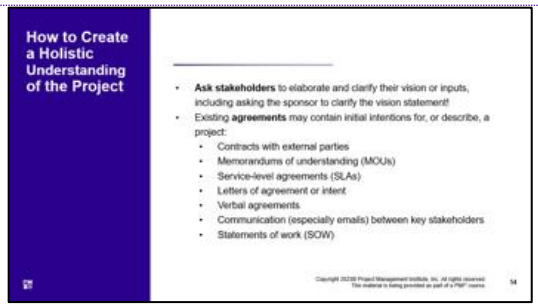
_____

Then

_____

_____

_____



How to Create a Holistic Understanding of the Project

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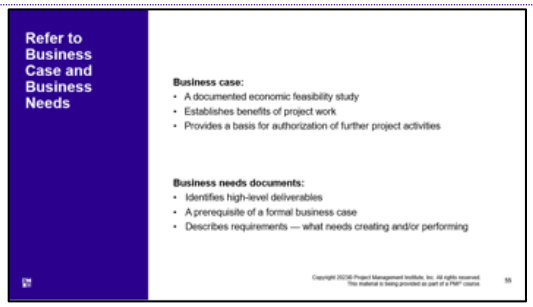

For further optional reading or reference in business analysis, PMI offers:

- The PMI Guide to Business Analysis (2017)
- Business Analysis for Practitioners: A Practice Guide *(2015)*

Login and access requires PMI membership

Refer to Business Case and Business Needs

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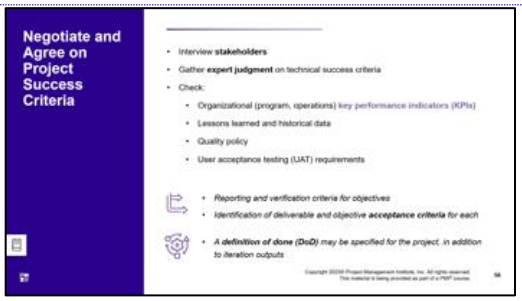

Negotiate and Agree on Project Success Criteria

Steps:

- Interview stakeholders
- Gather expert judgment on success criteria
- Check:
  - Key performance indicators (KPIs)
  - Lessons learned and historical data
  - Quality policy
  - User acceptance testing (UAT) requirements

_____

_____

_____

Acceptance criteria and definition of done (DoD):

_____

_____

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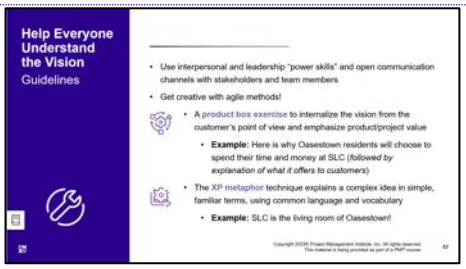

Help Everyone Understand the Vision: Guidelines

Guidelines

_____

_____

_____

Product Box Exercise

_____

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_____

Extreme Programming (XP) metaphor

_____

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Got Agreement on the Project Agreements?

_____

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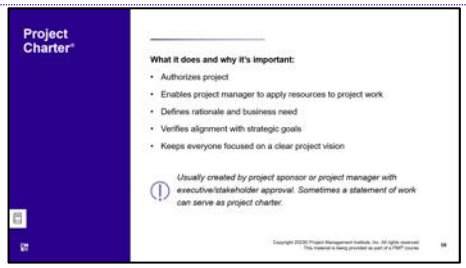

Project Charter

Project charter definition

_____

_____

_____

What it does and why it's important

_____

_____

_____

Project Charter: Contents

What's included:

_____

_____

_____

_____

_____

The Shawpe project team builds this project charter – see slides 34-35 of the Shawpe project case study! This example project charter is a concise, one-page document, but charters can vary in length and breadth.

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SHAWPE
INDUSTRIES

PROJECT CHARTER

PROJECT NAME	PROJECT MANAGER	PROJECT SPONSOR
Shawpe Lifestyle Center (SLC)	Ang Fen	Eugene Lowe

EMAIL	PHONE	ORGANIZATIONAL UNIT
ang.fen@shawpe.com	000.000.0000	Executive

ESTIMATED COSTS	EXPECTED SAVINGS	EXPECTED START DATE	EXPECTED COMPLETION
$10 Million	$0	Jan 20XX	Dec 20XX+2

PROJECT OVERVIEW

PROBLEM OR ISSUE	Rehabilitate commercial property in downtown Oasestown
PURPOSE OF PROJECT	Establish a profitable commercial development and community partnership in Oasestown
BUSINESS CASE	Attached. Approved by E. Lowe and BOD at Oct 20XX meeting.
GOALS / METRICS	Building code and other local government compliance with historic district construction
EXPECTED DELIVERABLES	"Rehabilitate 128,000 sq metre indoor/outdoor space to meet municipality standards and compliance with National Heritage & Conservation Board (NHC) standards / Property management entity established with Oasestown partner / Secure 14-18 highly reputable commercial tenants"
RISK - CONSTRAINTS, ASSUMPTIONS	1. Site in historical conservation zone 2. New vendors for specialist glasswork and masonry 3. Physical retail market stability 4. Resistant key stakeholder 5. Phase 3 financing dependent on success of Phases 1 and 2"

PROJECT SCOPE

WITHIN SCOPE	1. Manage construction contractors and site development; 2. conduct marketing and advertising to secure 14-18 high-quality tenants to anchor commercial space; 3. Work with community partners to establish socially beneficial community spaces and programs 4. Manage project budget (funded by external grant) within compliance
OUTSIDE OF SCOPE	1. architectual work - interior and exterior - Oases Architects 2. building work - XYZ General Contractors, ZYX specialist contractors 3. External grant fund management

TENTATIVE SCHEDULE

	KEY MILESTONE	START	FINISH
	Form Project Team / Preliminary Review / Scope	00/00/0000	00/00/0000
	Finalize Project Plan / Charter / Kick Off	00/00/0000	00/00/0000
Phase 1	Design and build interior	00/00/0000	00/00/0000
Phase 1	Create contract with community groups	00/00/0000	00/00/0000
Phase 1	Recruit 14-18 tenants	00/00/0000	00/00/0000
Phase 2	Design and build outdoor spaces	00/00/0000	00/00/0000
Phase 2	Install community programs	00/00/0000	00/00/0000
Phase 2	Secure $5M revenue in annual commercial rents	00/00/0000	00/00/0000
Phase 3	Finalize all construction	00/00/0000	00/00/0000
Phase 3	Train SLC property management staff	00/00/0000	00/00/0000

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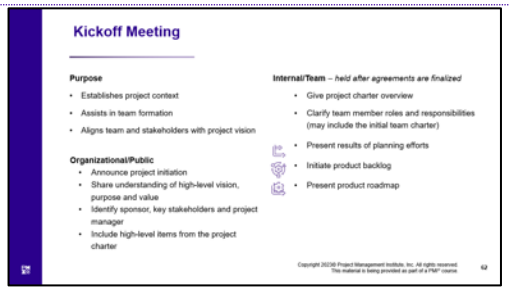


Kickoff Meeting

Purpose:

_____

_____

_____

Organizational/public:

_____

_____

Internal/team:

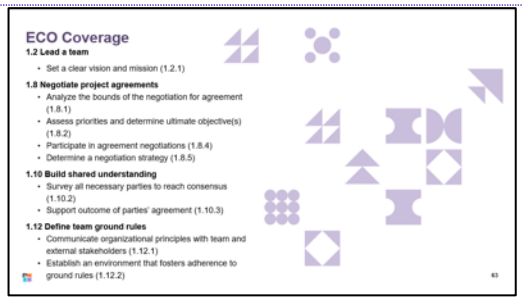
_____

_____

Any specific differences according to life cycle?

_____

_____



End of Topic 2C

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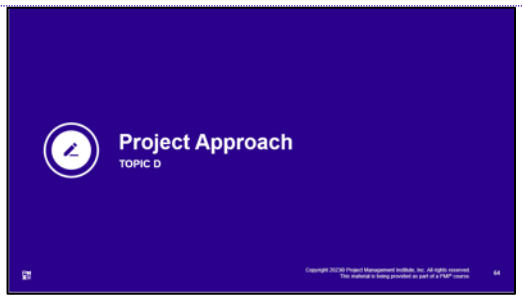
TOPIC 2D | PROJECT APPROACH

ECO Coverage

2.13 Determine appropriate project methodology/ methods and practices

- Assess project needs, complexity, and magnitude (2.13.1)
- Recommend project execution strategy (e.g., contracting, financing) (2.13.2)
- Recommend a project methodology/approach (i.e., predictive, adaptive, hybrid) (2.13.3)



Topic 2D: Project Approach

Now that you have a clearer idea of the purpose, objective, stakeholders, and team resources required for the project, you and your team will be thinking about how you can best approach the work.

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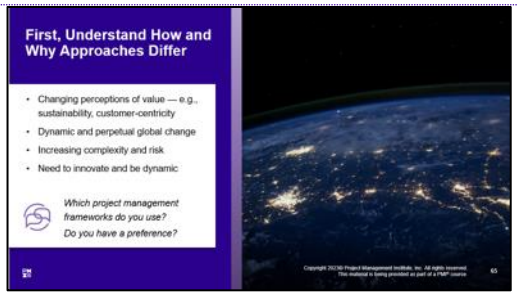

First, Understand How and Why Approaches Differ

_____

_____

_____

_____

_____

Which project management frameworks do you use?
Do you or your organization have a preference?

_____

_____

_____

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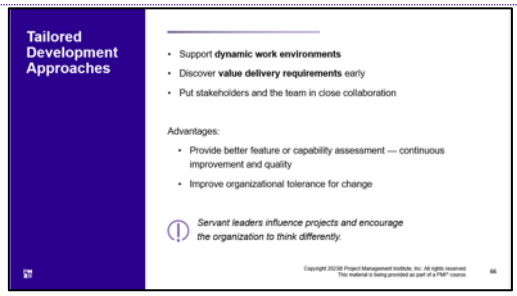
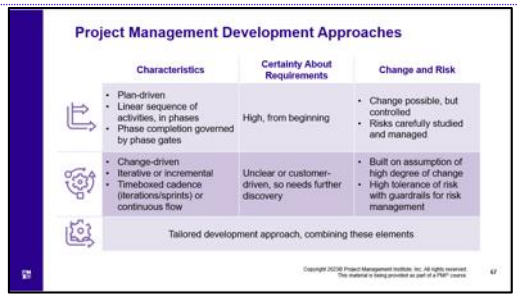


Tailored Development Approaches

Role of servant leadership in tailoring a development approach:



Project Management Development Approaches

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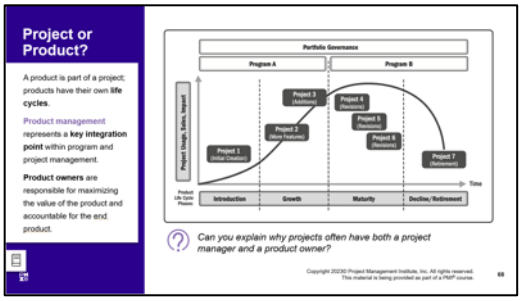


Figure 2-4. Sample Product Life Cycle | The Standard for Project Management, PMBOK® Guide – Seventh Edition

Project or Product?

Product management definition:

_____

_____

Product / project relationship:

_____

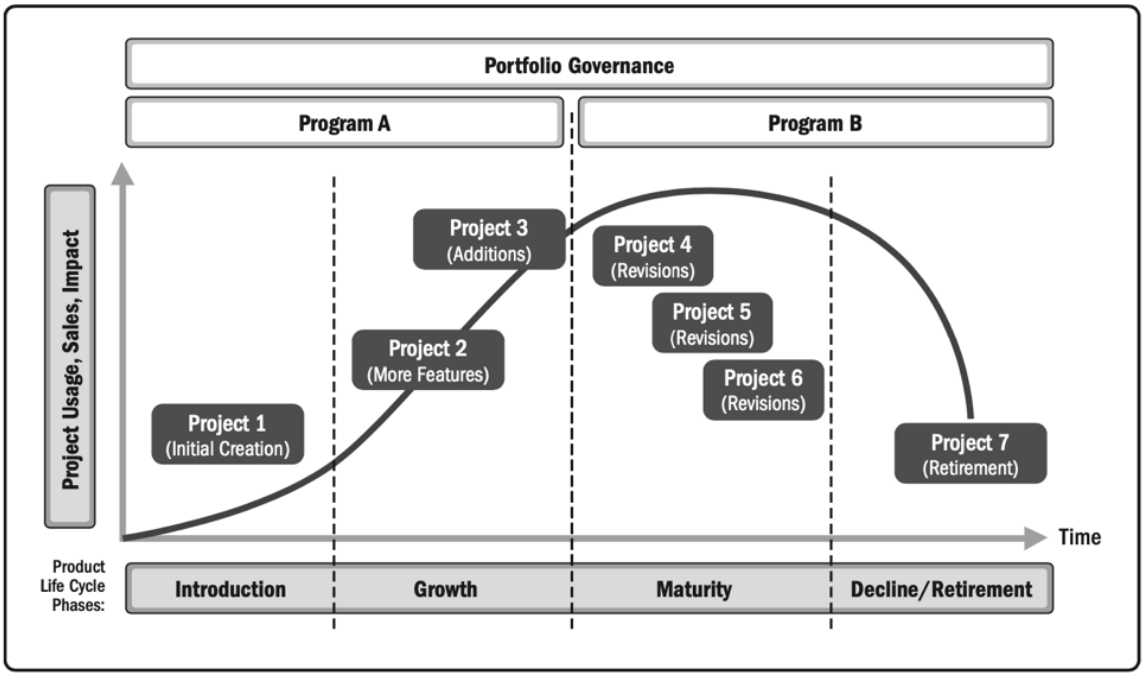
_____

_____

Explain why projects often have both a project manager and a product owner:

_____

_____



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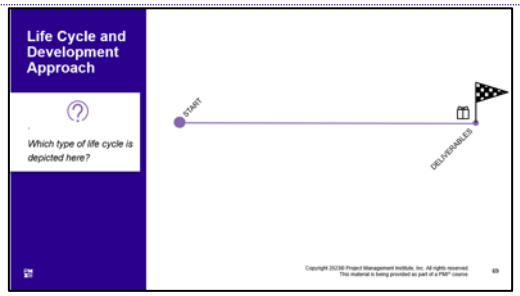
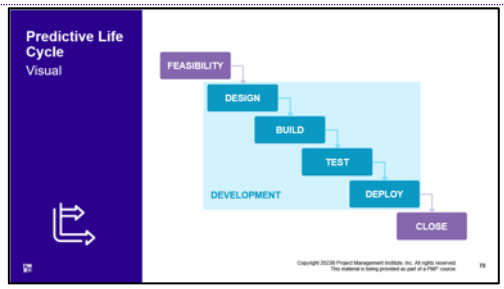


Life

Cycle and Development Approach

What kind of life cycle is depicted here?

_____



Predictive Life Cycle Visual

_____

_____

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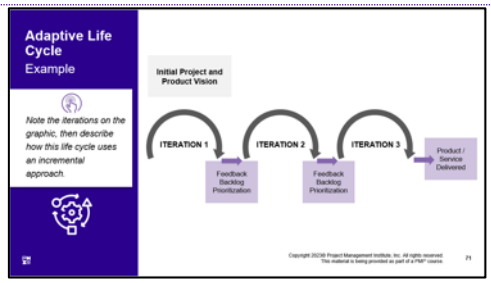

Adaptive Life Cycle Example

How does the depicted life cycle show an incremental approach?

_____

_____

_____

_____

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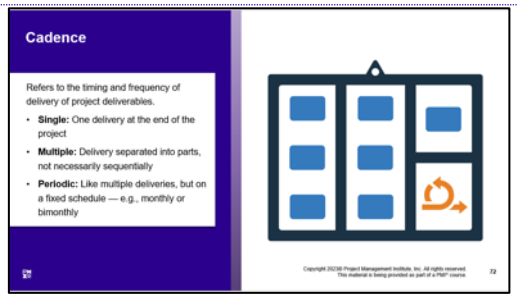

Cadence

Definition

_____

_____

_____

Single delivery – definition and typical use case

_____

_____

_____

Multiple delivery – definition and typical use case

_____

_____

_____

Periodic delivery – definition and typical use case

_____

_____

_____

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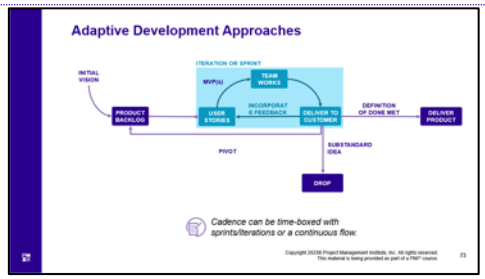


Adaptive Development Approaches

Can you explain the concepts and steps in this diagram?

_____

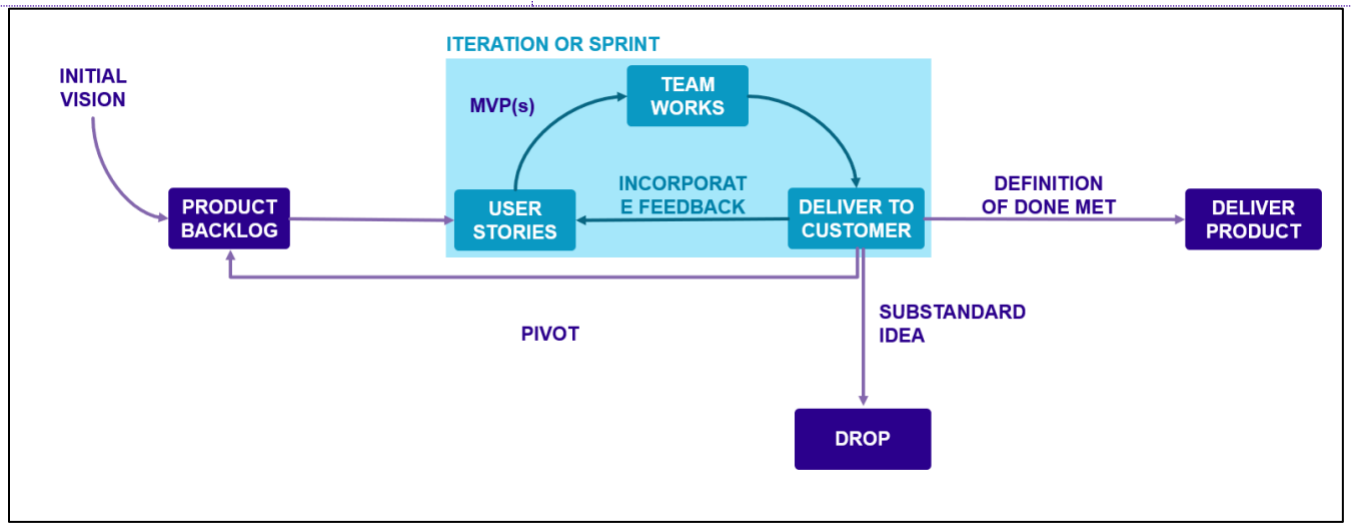
_____

_____

_____

_____

_____



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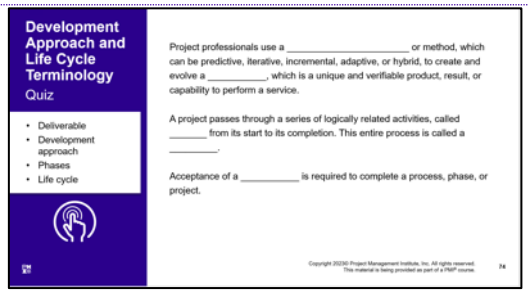

Development Approach and Life Cycle Terminology Quiz

Fill in the blanks using the following words:

- Deliverable
- Development approach
- Life cycle
- Phases

Project professionals use a _____ or method, which can be predictive, iterative, incremental, adaptive, or hybrid, to create and evolve a _____, which is a unique and verifiable product, result, or capability to perform a service.

A project passes through a series of logically related activities, called _____ from its start to its completion. This entire process is called a _____.

Acceptance of a _____ is required to complete a process, phase, or project.

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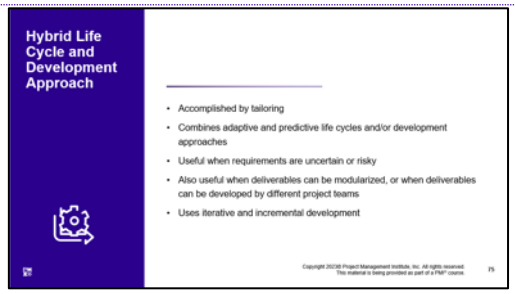

Hybrid Life Cycle and Development Approach

According to PMI research, most projects are hybrid. But how and why are they created? What are the business needs or drivers? Think about project approach in terms of systems' interactions.

Hybrid Project Approaches: Examples

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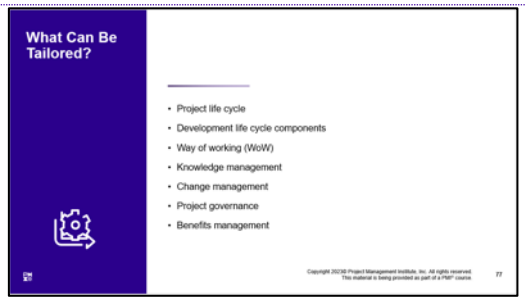
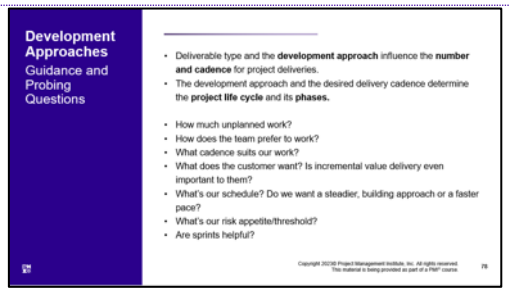
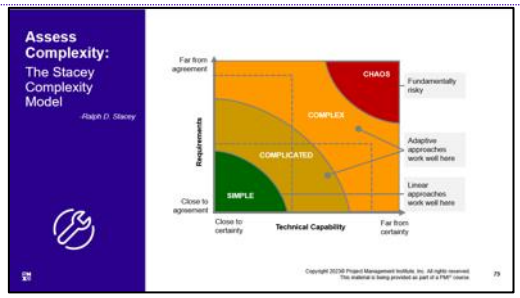


What Can Be Tailored?



Development Approaches: Guidance and Probing Questions



Assess Complexity: The Stacey Complexity Model

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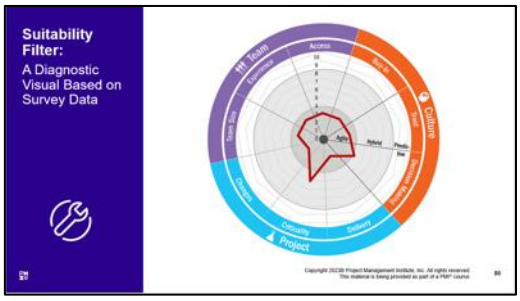
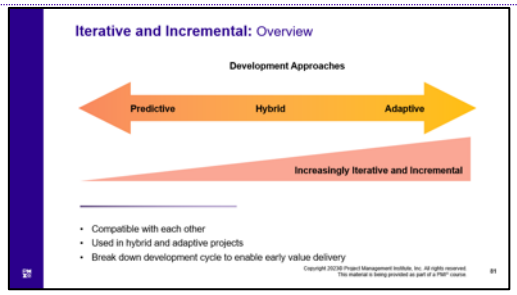


Suitability Filter: A Diagnostic Visual Based on Survey Data

For more information on how to use this tool: Agile Practice Guide, p. 127+



Iterative and Incremental: Overview

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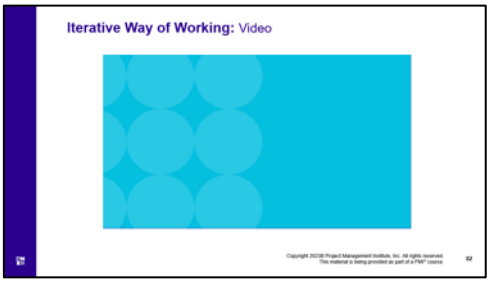
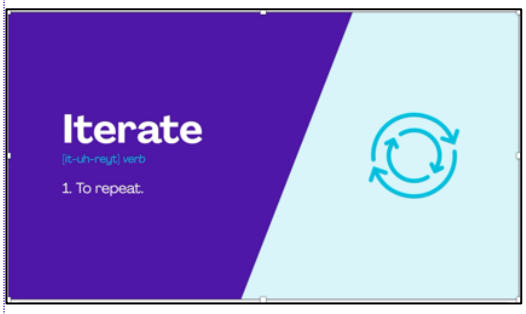


Video

Also available for viewing in your LO CHOICE dashboard



Iterative Way of Working Video

The video mentions the following artifacts and ceremonies. We'll look at an overview of agile ceremonies in this lesson; the others are discussed as follows:

- Product backlog – Lesson 3
- Iteration backlog – Lesson 3
- User stories – Lesson 3
- Burndown chart – Lesson 5
- Iteration planning – Lesson 3
- Coordination meeting – aka standup or scrum – Lesson 2
- Iteration demonstration – aka Demo – Lesson 5
- Iteration retrospective – Lesson 4

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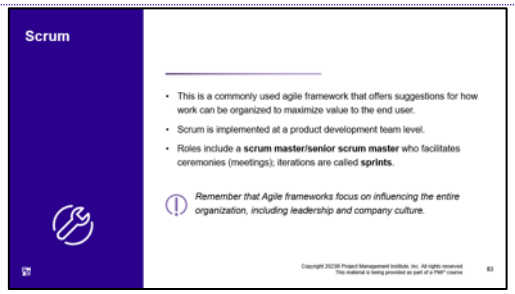


Scrum

Scrum master / senior scrum master

_____

_____

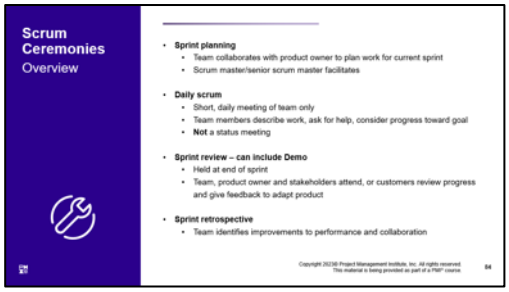
_____

Sprints (iterations)

_____

_____

_____



Scrum Ceremonies: Overview

Sprint planning:

_____

_____

_____

Daily scrum:

_____

_____

_____

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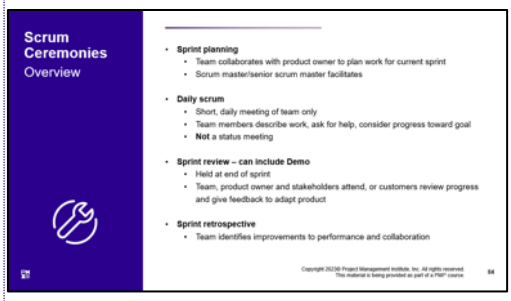

Scrum Ceremonies (continued)

Sprint review—can include demo

_____

_____

_____

Sprint retrospective

_____

_____

_____

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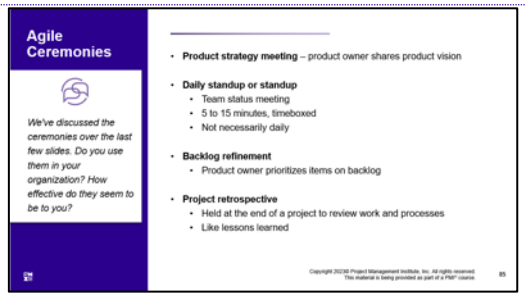

Agile Ceremonies

Do you use these agile ceremonies in your organization? How effective do they seem to be to you?

Product strategy meeting

_____

_____

Daily meeting or standup:

_____

_____

Backlog refinement

_____

_____

Project retrospective

_____

_____

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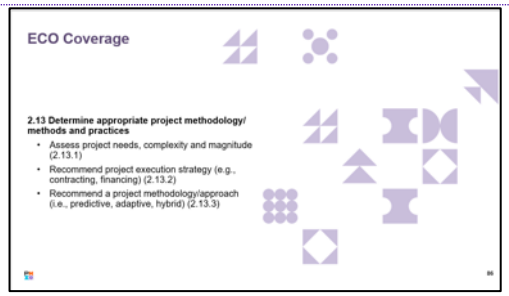
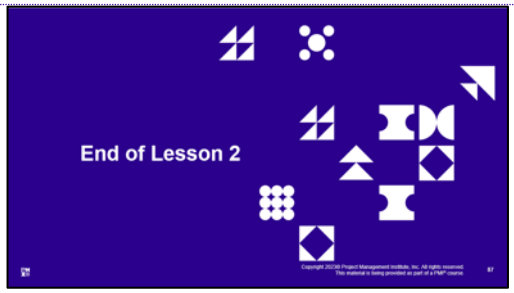


End of Topic 2D



End of Lesson 2

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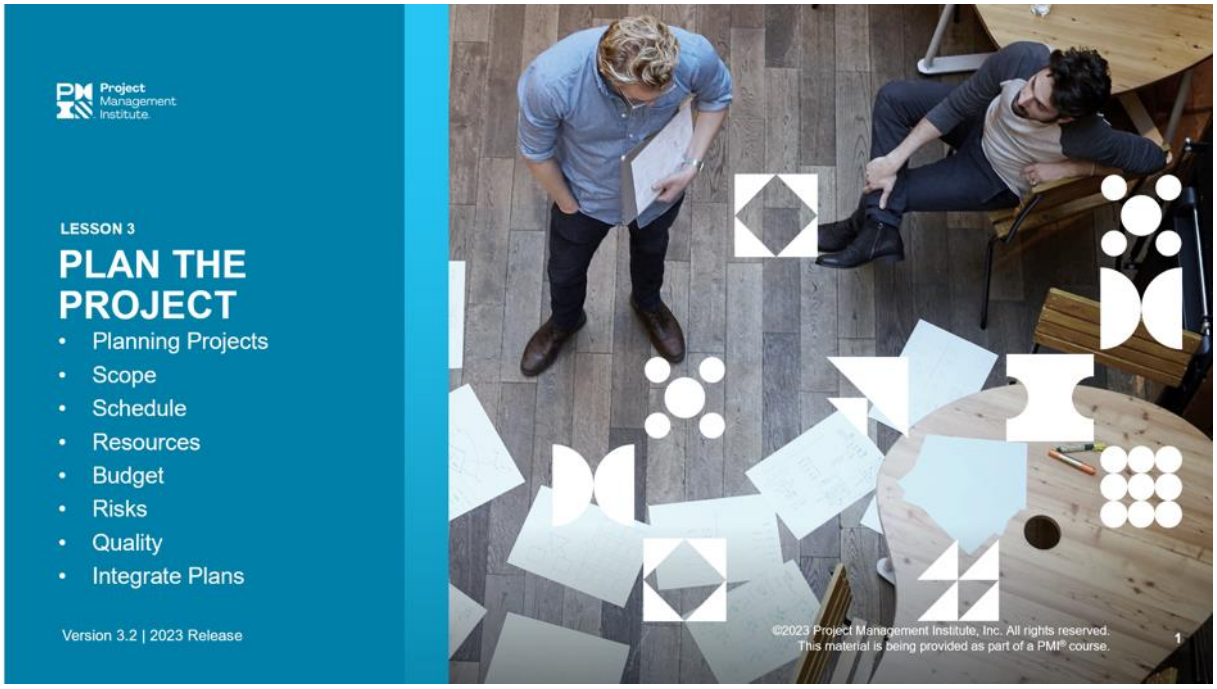

Lesson 3: Plan the Project

Description

Planning includes all aspects of a project, including scope, schedule, budget, quality, risk, and finally, putting it all together.

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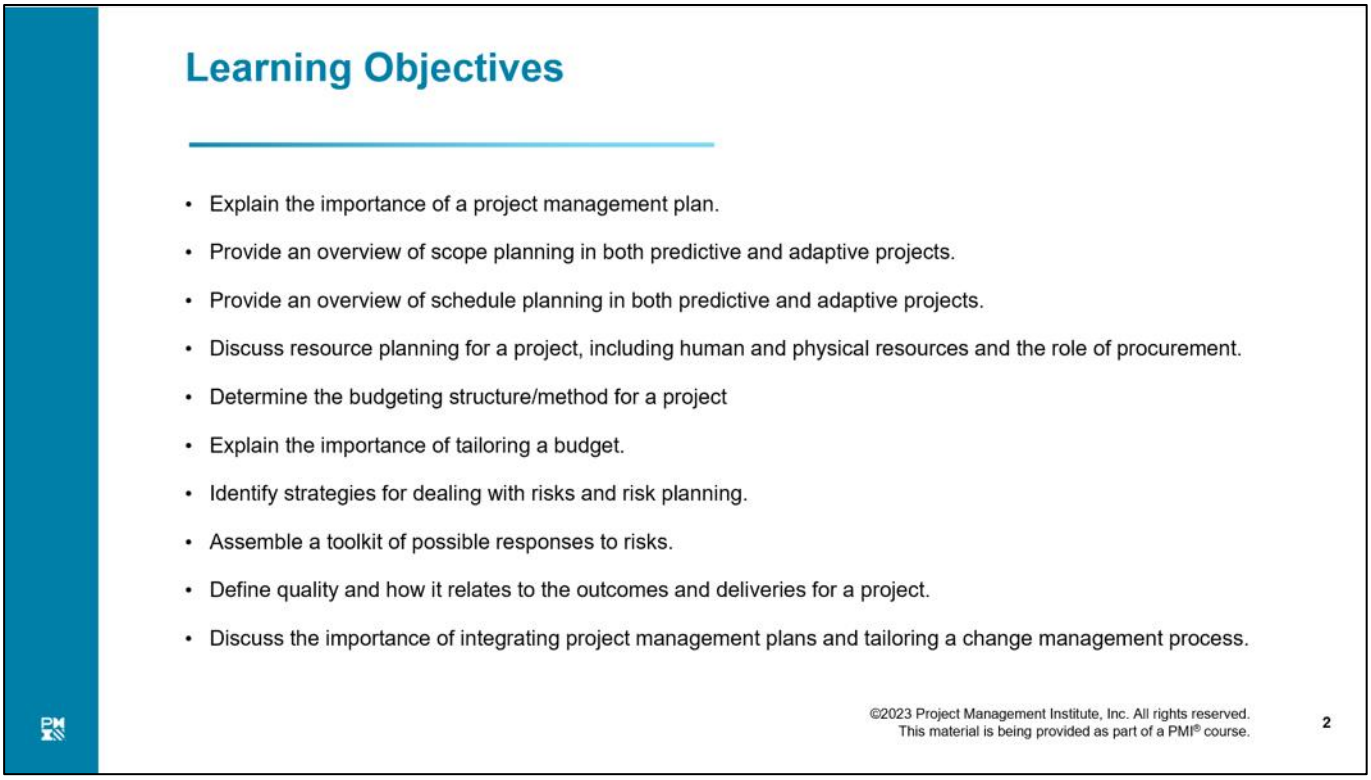

Topics

A. Planning projects
B. Scope
C. Schedule
D. Resources
E. Plan budget
F. Risks
G. Quality
H. Integrate plans

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Lesson 3 Notes

TOPIC 3A | PLANNING PROJECTS

Topic Coverage

- Differentiation of planning in predictive and adaptive approaches

Topic 3A: Planning Projects

In this lesson, we look at how project teams can plan for successful outcomes using PMI best practices. Most of the content in this section refers to the "Process" domain in the exam content outline, or the Way of Working side of the Talent Triangle®, but we will explore relevant leadership "power skills" and business environment factors as well.

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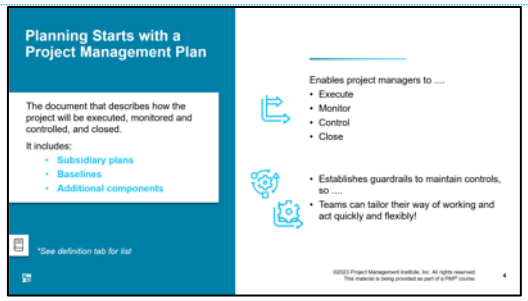

SUBSIDIARY MANAGEMENT PLANS

- Scope management plan
- Requirements management plan
- Schedule management plan
- Cost management plan
- Quality management plan
- Resource management plan
- Communications management plan
- Risk management plan
- Procurement management plan
- Stakeholder engagement plan

BASELINES

- Scope baseline
- Schedule baseline
- Cost baseline

ADDITIONAL COMPONENTS

- Change management plan
- Configuration management plan
- Performance measurement baseline
- Project life cycle
- Development approach
- Management reviews

Planning Starts with a Project Management Plan

Subsidiary plans

_____

_____

_____

_____

_____

Baselines

_____

_____

_____

Additional components

_____

_____

_____

Enables project managers to:

_____

_____

_____

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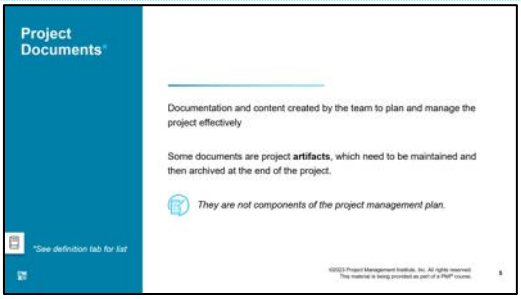

Project Documents

Definition and description:

_____

_____

_____

_____

_____

_____

Typical project documents include:

_____

_____

_____

_____

_____

_____

_____

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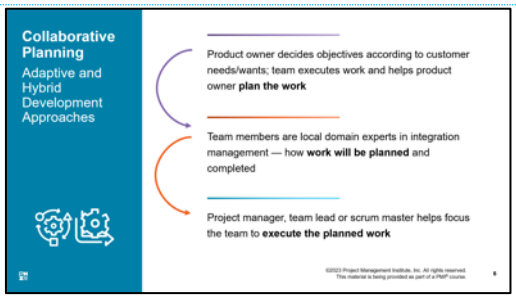

Collaborative Planning: Adaptive and Hybrid Development Approaches

Describe the typical flow or setup in adaptive/hybrid planning approaches:

_____

_____

_____

_____

_____

_____

_____

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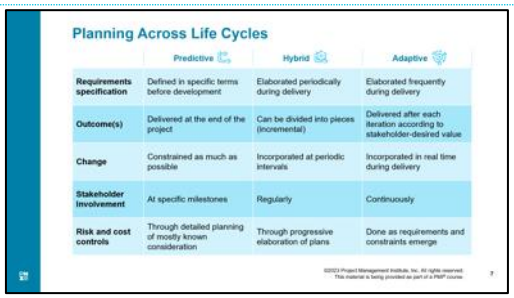
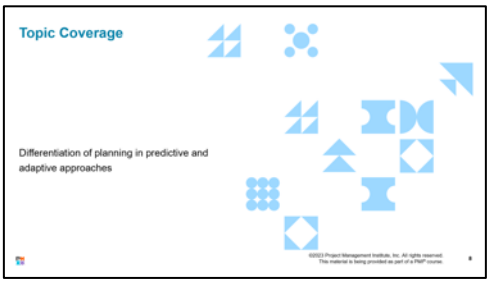


Planning Across Life Cycles

	Predictive	Hybrid	Adaptive
Requirements specification			
Outcome(s)			
Change			
Stakeholder Involvement			
Risk and cost controls			



End of Topic 2A

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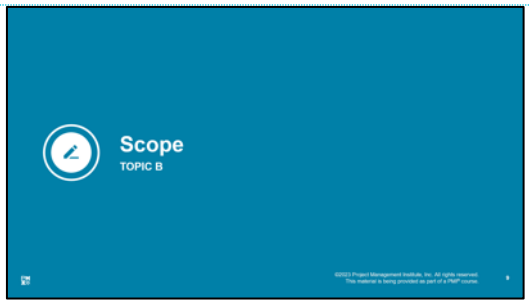
TOPIC 3B | SCOPE

ECO Coverage

2.1 Execute project with the urgency required to deliver business value
- Support the team to subdivide Project tasks as necessary to find the minimum viable product (2.1.3)

2.8 Plan and manage scope
- Predictive vs Adaptive approach for scope
- Determine and prioritize requirements (2.8.1)
- Break down scope (e.g., WBS, backlog) (2.8.2)

2.17 Plan and manage project/phase closure or transitions
- Determine criteria to successfully close the project or phase (2.17.1)
- Differentiation of planning in predictive and adaptive approaches



Topic 2B: Scope

Now that we have an overview of how project planning happens across project life cycles, we're ready to get into the business of planning! Typically, we start with scope.

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The examples on this slide are from the scenario in the optional Shawpe (SLC) case study exercise (self-study) included with this course.

Scope

Project scope

_____

_____

_____

Product scope

_____

_____

What does fixed or flexible mean?

_____

_____

_____

_____

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Enlarged version with click-outs

Adaptability and Resilience in Planning

Rolling wave planning

_____

_____

Progressive elaboration

_____

_____

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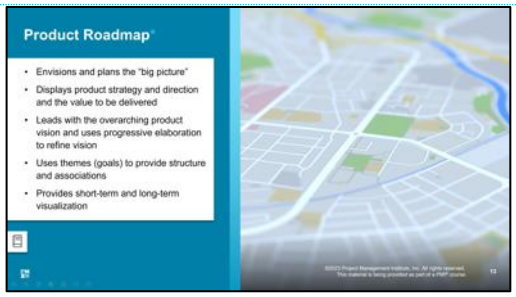
Video

This video provides a closer look at MVPs and MBIs.

MVP or MBI? Planning for Work Incrementally



Product Roadmap

Product roadmap

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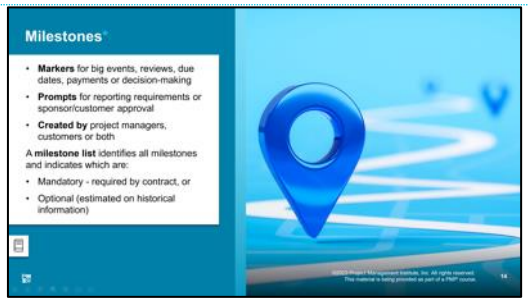


Milestones

Definition and description

_____

_____

_____

A milestone list identifies all milestones and indicates which are:

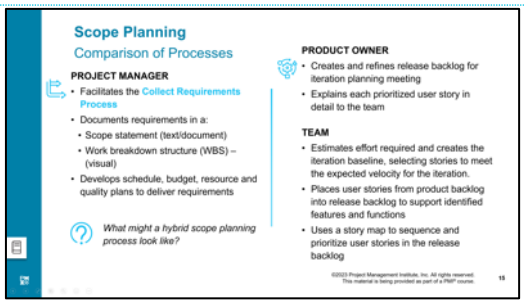
_____

_____

_____

_____

_____



Scope Planning: Comparison of Processes

Project manager:

_____

_____

_____

_____

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Product owner:

_____

_____

Team:

_____

_____

Collect requirements process

_____

_____

Requirements documentation

_____

_____

User story

_____

_____

What might a hybrid scope planning process involve?

_____

_____

_____

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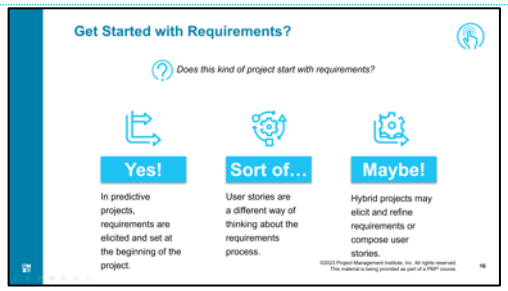
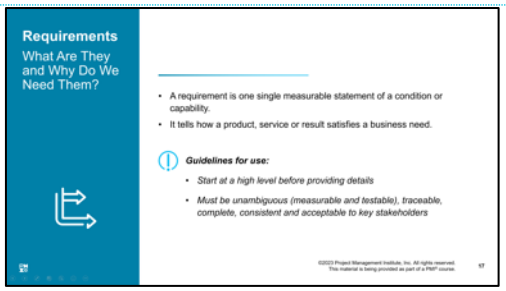


Get Started with Requirements?

Do all types of projects start with requirements? Describe each development approach to requirements or an analogous requirements process – i.e., user stories.



Requirements: What Are They and Why Do We Need Them?

Definition and description:

Guidelines for use:

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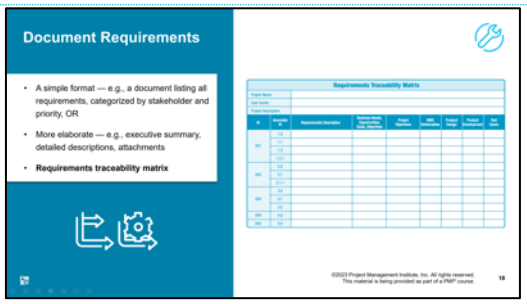

Document Requirements

Description of requirements documentation:

_____

_____

_____

Requirements traceability matrix:

_____

_____

_____

Requirements Management Plan: Plan Track and Report on Requirements Activities

_____

_____

_____

_____

_____

_____

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_____

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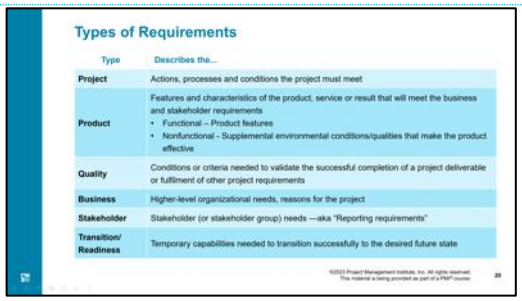

Types of Requirements

_____

_____

_____

_____

Type	Describes the
Project	
Product	
Quality	
Business	
Stakeholder	
Transition/Readiness	

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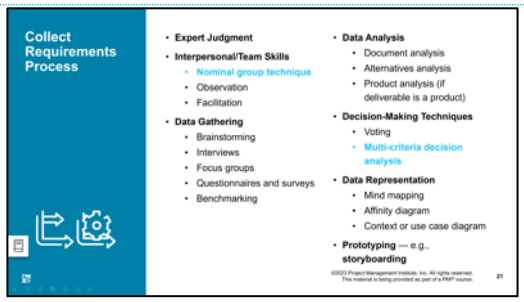

Take notes on these tools and techniques used in the Collect Requirements process.

Collect Requirements Process

Expert judgment / Interpersonal/team skills

Data gathering

Data analysis

Decision-making techniques

Data representation

Prototyping – e.g., storyboarding

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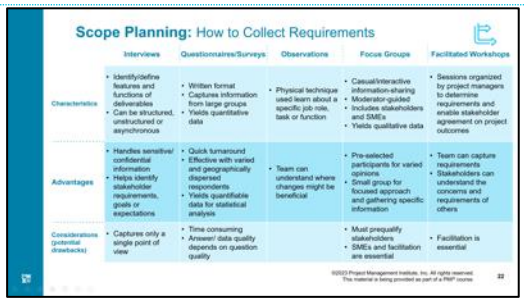
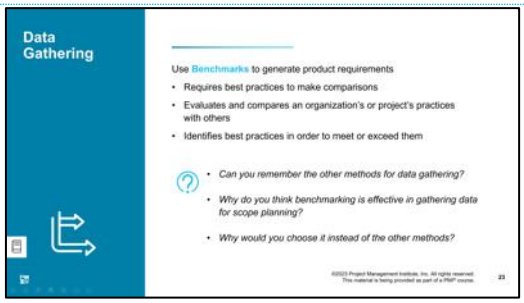


Scope Planning: How to Collect Requirements



Data Gathering

Benchmarking

Use benchmarks to generate product requirements.

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Can you remember the other methods for data gathering?

_____

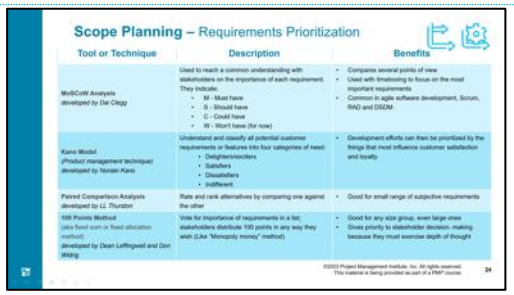
_____

Why do you think benchmarking is effective in gathering data for scope planning?

_____

_____

_____



Scope Planning-Requirements Prioritization

_____

_____

_____

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Represent Data

Mind mapping

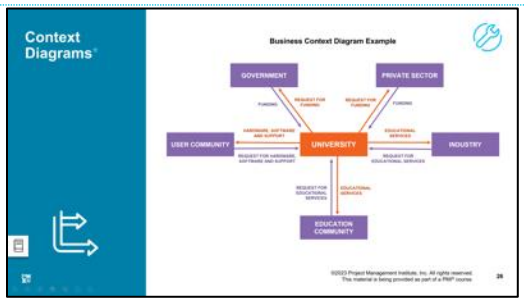
_____

_____

Affinity diagram

_____

_____



Context Diagram

Context diagram

_____

_____

_____

Prototyping

Storyboarding

_____

_____

_____

_____

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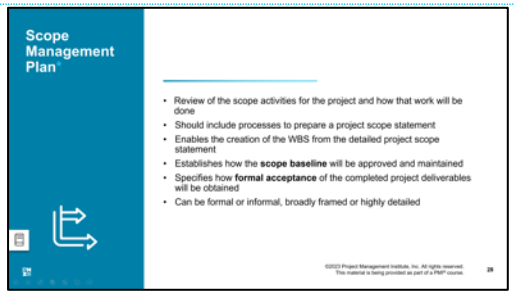
Prototypes



Scope Management Plan

Scope management plan

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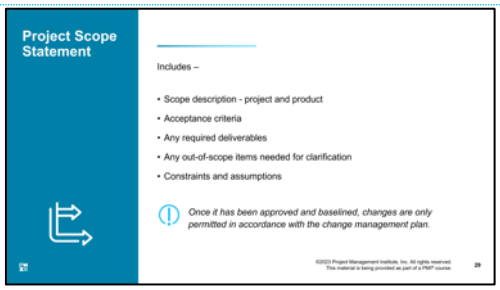

Project Scope Statement

Includes:

_____

_____

_____

_____

_____

_____

Guidelines:

_____

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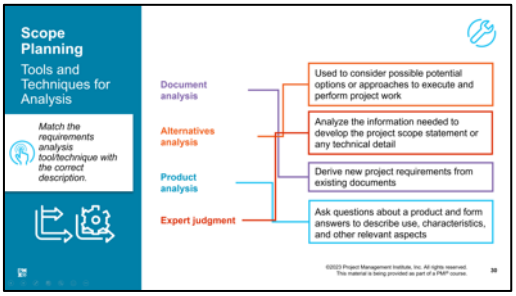

Scope Planning: Tools and Techniques for Analysis

Match the requirements analysis tool/technique with the correct description

This is a matching exercise you should have completed with the class.

Document analysis	Used to consider possible potential options or approaches to execute and perform project work
Alternatives analysis	Analyze the information needed to develop the project scope statement or any technical detail
Product analysis	Derive new project requirements from existing documents
Expert judgment	Ask questions about a product and form answers to describe use, characteristics, and other relevant aspects

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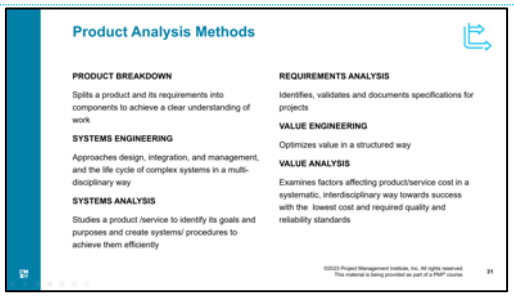

Product Analysis Methods

Product breakdown

_____

_____

Systems engineering

_____

_____

Systems analysis

_____

_____

Requirements analysis

_____

_____

Value engineering

_____

_____

Value analysis

_____

_____

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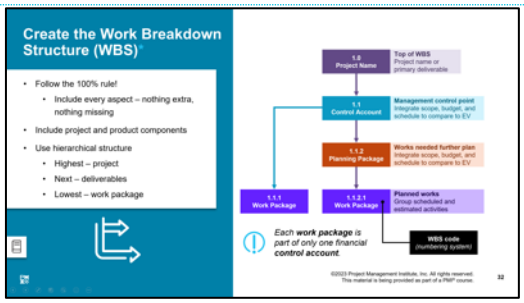
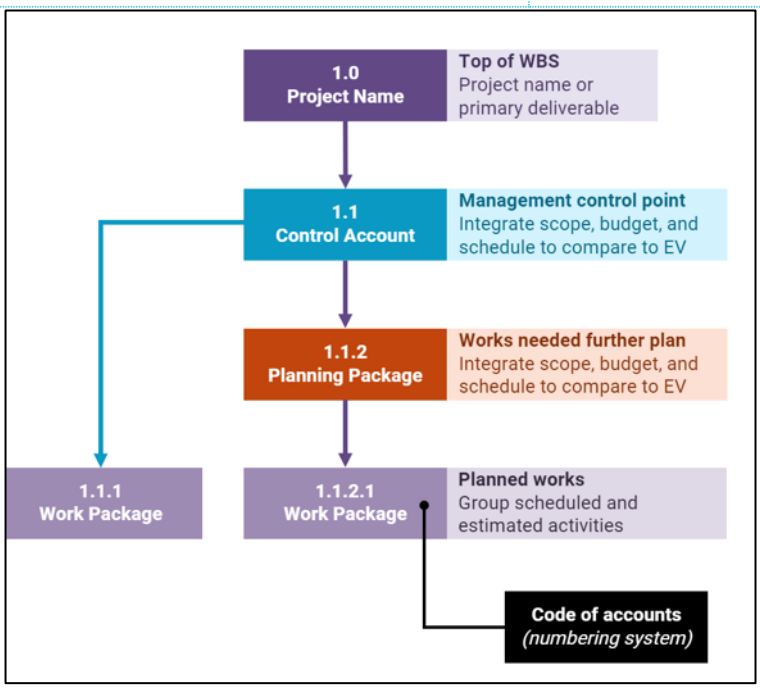


Create the Work Breakdown Structure

Work breakdown structure (WBS)



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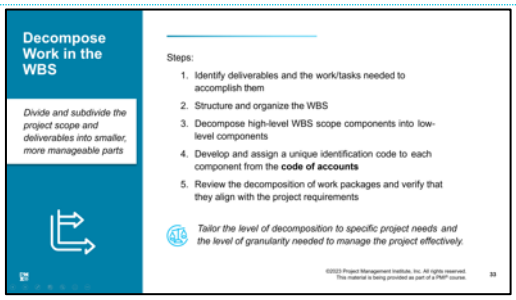
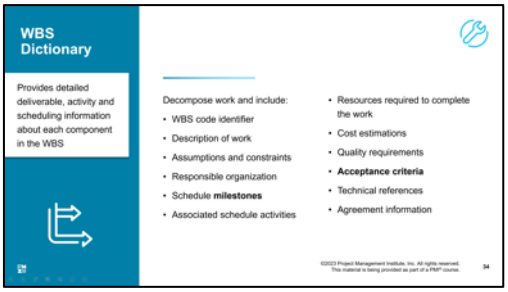


Decompose the Work in the WBS

Divide and subdivide the project scope and deliverables into smaller, more manageable parts

Steps:



WBS Dictionary

Provides detailed deliverable, activity, and scheduling information about each component in the WBS

Decompose work and include:

You can find an example of a WBS dictionary entry in the optional Shawpe (SLC) case study exercise (self-study) included with this course.

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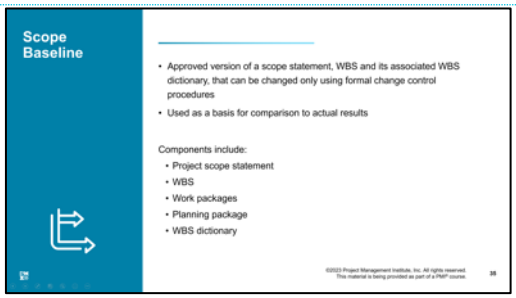


Scope Baseline

_____

_____

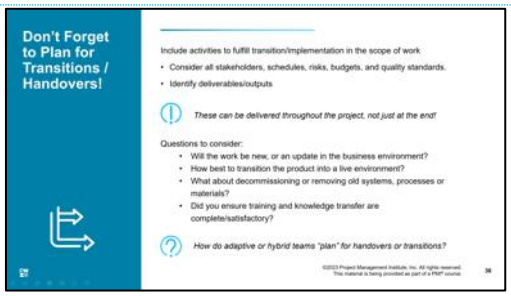
_____

Components include:

_____

_____

_____



Don't Forget to Plan for Transitions/Handovers

_____

_____

_____

Questions to consider:

_____

_____

_____

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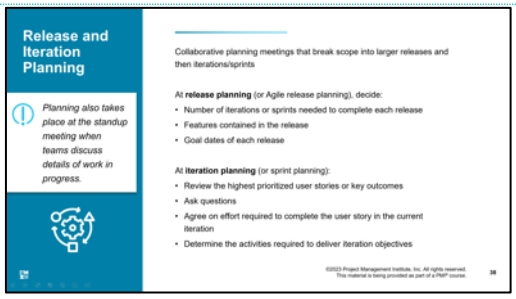
Scope Planning in Adaptive Environments



Release and Iteration Planning

Planning also takes place at the daily standup meeting when teams discuss details of work in progress.

Collaborative planning meetings that break scope into larger releases and then iterations/sprints

At release planning (or Agile release planning), decide:

At iteration planning (or sprint planning):

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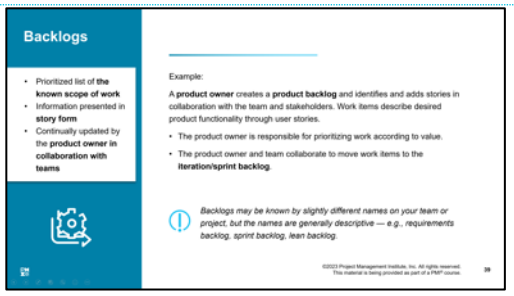
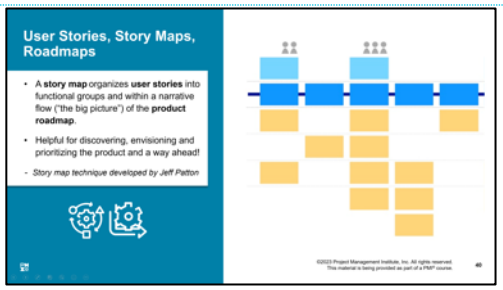
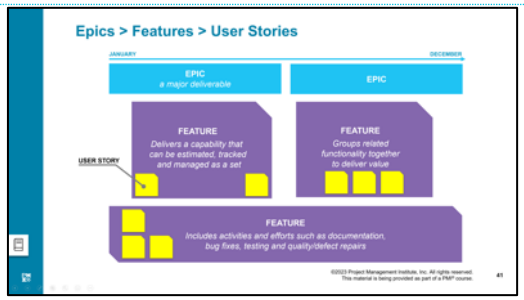


Backlogs



The Story Map technique was developed by Jeff Patton.

User Stories, Story Maps and Roadmaps



Epics> Features>User Stories

Epic

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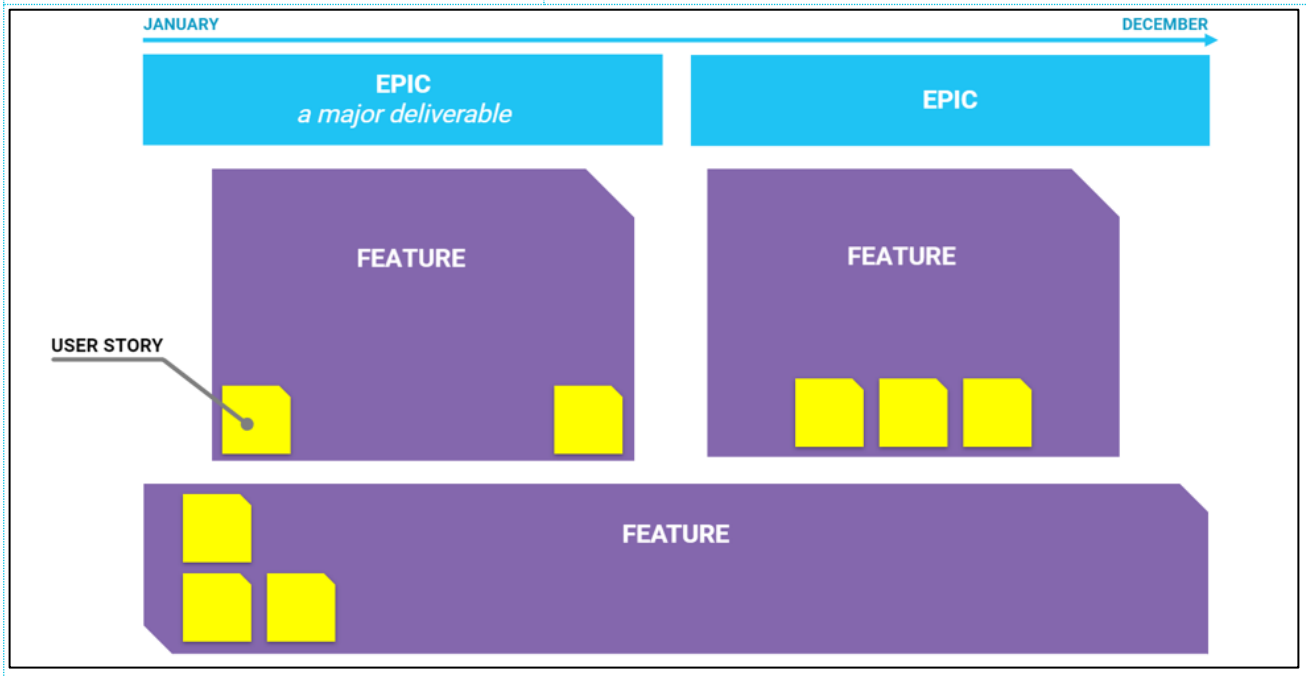
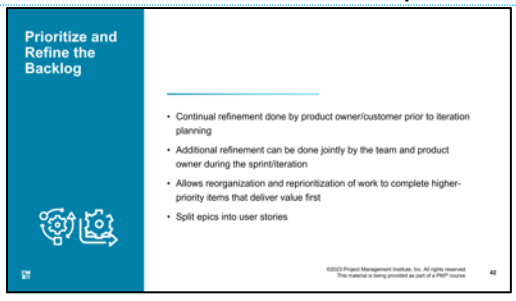
Feature



Note the timeline at the top which indicates the varied and typical intervals of each component.

Also note the situation of each – for example, epics can include more than one feature and user stories are placed within features



Prioritize and Refine the Backlog

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Ang Fen, project manager at Shawpe Industries

You can find more practice questions in the optional Shawpe (SLC) case study exercise (self-study) included with this course.

Plan Scope: Quiz

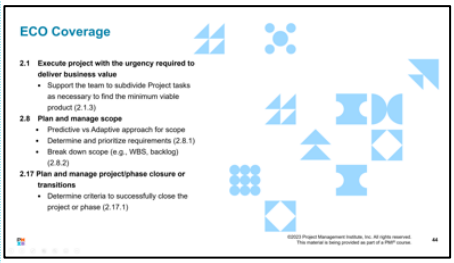
This is a similar format to the PMP® certification exam, except without names of individuals and companies.

Which two stakeholders perform project scope planning? *(Choose two)*

a) Ang Fen, project manager
b) Helen Grey, product owner
c) Eugene Lowe, project sponsor
d) Project team

Ang Fen wants to give the executive team an overview of the work ahead at the next strategy meeting. Which artifact should he show them?

a) Scope management plan
b) Product roadmap
c) Scope statement
d) Work breakdown structure



End of Topic 2B

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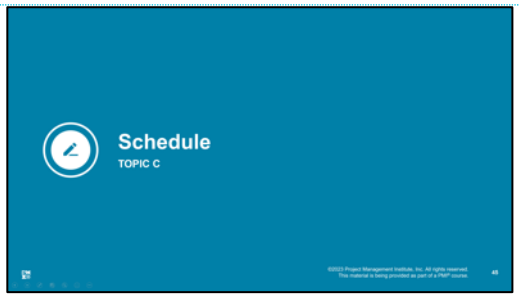
TOPIC 3C | SCHEDULE

ECO Coverage

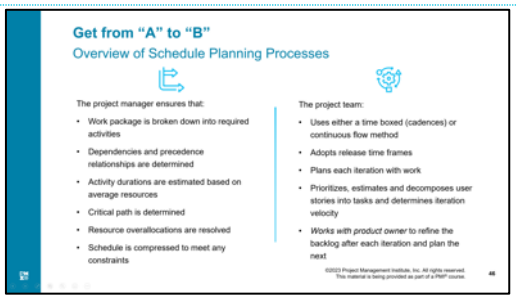
2.6 Plan and manage schedule

- Predictive vs adaptive approach for schedule
- Estimate project tasks (milestones, dependencies, story points) (2.6.1)
- Utilize benchmarks and historical data (2.6.2)
- Prepare schedule based on methodology (2.6.3)



Topic 3C: Schedule

Schedule planning can follow a few different trajectories, depending on the project life cycle in use. Let's start with some general concerns common in all kinds of projects and then explain schedule planning in predictive and then adaptive and hybrid settings.



Get from "A" to "B"

Overview of the schedule planning process

In a predictive approach, the **project manager**:

_____

_____

_____

_____

_____

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In adaptive approaches, the **project team**:

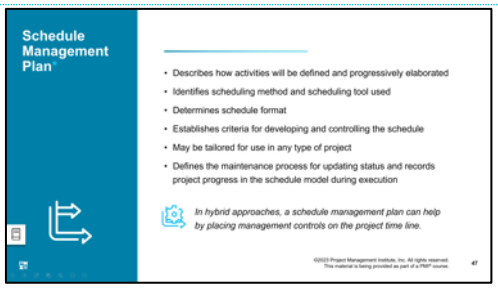
_____

_____

_____

_____

_____



Schedule Management Plan

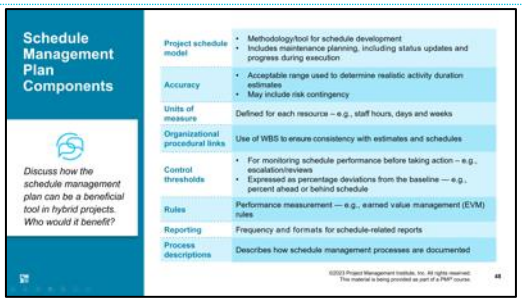
Schedule management plan

_____

_____

_____

_____



Schedule Management Plan Components

Discuss how the schedule management plan can be a beneficial tool in hybrid projects. How and who would it benefit?

_____

_____

The schedule management plan includes the components in the table. Take notes there.

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Project schedule model	
Accuracy	
Units of measure	
Organizational procedural links	
Control thresholds	
Rules	
Reporting	
Process descriptions	

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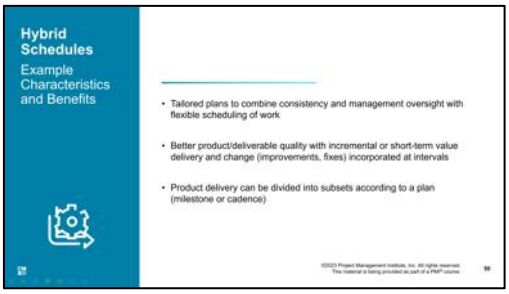
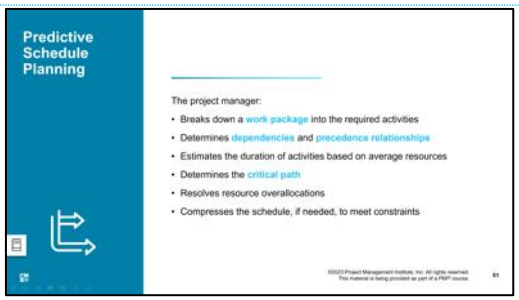
Start with Benchmarks and Historical Data

Benchmarking

Historical data



Hybrid Schedules: Example Characteristics and Benefits



Predictive Schedule Planning

Work package

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Precedence relationship

_____

_____

_____

Dependency

_____

_____

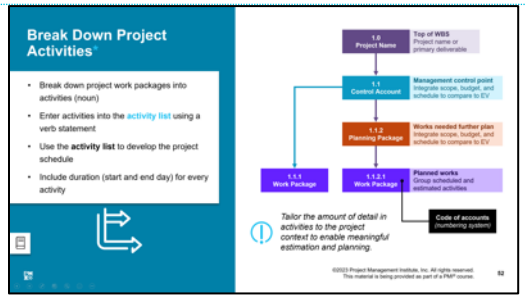
_____

Critical path

_____

_____

_____



Break Down Project Activities

Project activities

_____

_____

Activity list

_____

_____

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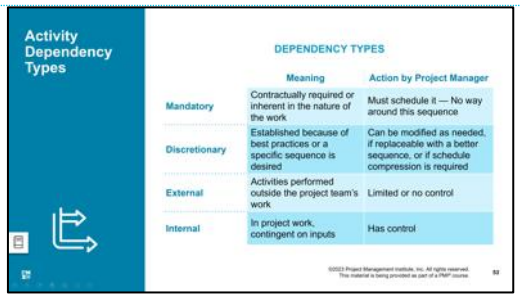
Code of accounts

_____

_____



Activity Dependency Types

_____

_____

	Meaning	Action by Project Manager
Mandatory		
Discretionary		
External		
Internal		

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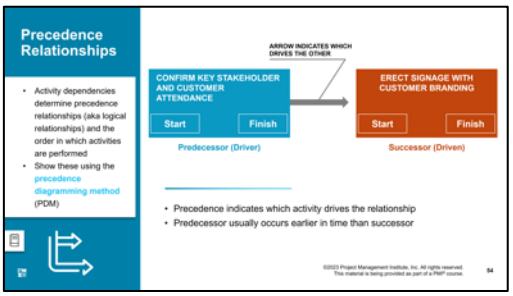
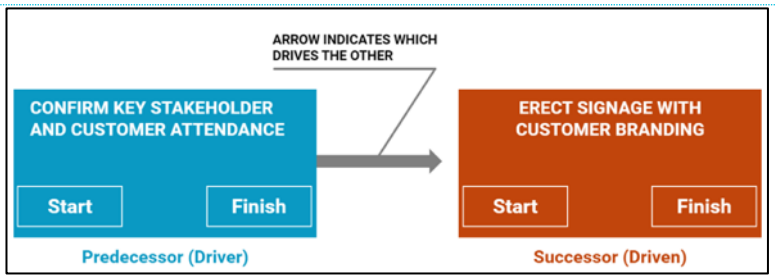


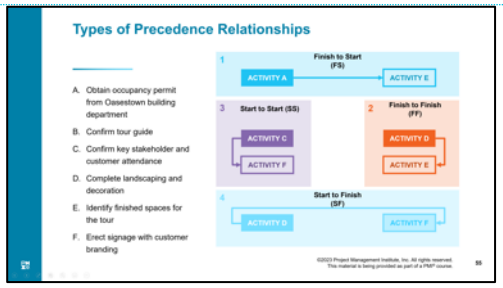
The activities relate to the project work in the optional Shawpe (SLC) project case study.



Precedence Relationships

Precedence diagramming method

- This graphic is a **finish-to-start relationship** example:
- The team needs to CONFIRM KEY STAKEHOLDER AND CUSTOMER ATTENDANCE and then ERECT SIGNAGE WITH CUSTOMER BRANDING.
- They need to apply the budget and time only to the customers who are committed to attending.



Types of Precedence Relationships

- Finish to start (FS)
- Finish to finish (FF)
- Start to start (SS)
- Start to finish (SF)

These are explained below, and an example is given of each.

The activities in this schedule network diagram relate to the Shawpe (SLC) project case study. The narrative is given here for those who benefit from learning about the precedence relationships by example.

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Activities used in diagram:

A. Obtain occupancy permit from Oasestown building department
B. Confirm tour guide
C. Confirm key stakeholder and customer attendance
D. Complete landscaping and decoration
E. Identify finished spaces for the tour
F. Erect signage with customer branding

Explore this excerpt of a **schedule network diagram**. Note each colored box is labelled with a number.

1. Finish-to-start (FS): - A logical relationship in which a successor activity cannot start until a preceding (predecessor) activity has finished.

For example: Obtain occupancy permit from Oasestown building department **before** the team can identify finished spaces for the tour. The total time for these two activities is the sum of A + E.

- **Explanation:** The company can only take visitors to spaces that are certified safe for occupancy.

2. Finish-to-finish (FF): A logical relationship in which a successor activity cannot finish until a preceding activity (predecessor) has finished.
For example: Complete landscaping and decoration must be finished before identifying finished spaces for

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the tour. The total time to complete both activities is the sum of D + E, minus any overlap.

- **Explanation:** The team only wants to show finished spaces, so the landscaping and decoration must be completed before the space can be identified as “finished.”

3. Start-to-start (SS): A logical relationship in which a successor activity cannot start until a preceding activity (predecessor) has started.
For example: The team can’t erect stakeholder-specific signage for the tour before key stakeholder attendance is confirmed. As with the FF example, the total time for activities C and F will vary, depending on when Activity F starts. But in SS, execute, is a longer window of time during which Activity F can begin.
Explanation: The marketing team can’t erect stakeholder-specific signage without confirming which stakeholders will attend! But they can start designing the signs and ordering the materials while they wait for confirmation.

4. Start-to-finish (SF): A logical relationship in which a successor activity cannot finish until a preceding activity (predecessor) has started.
For example: Complete landscaping and decoration can’t end until erect stakeholder-specific signage for tour has started. The total time for two activities in an SF relationship is either D or F, whichever is longer.

- **Explanation:** The groundskeeping team can start landscaping and decorating at any time, but until the signs are erected and the whole site is tidied up, they cannot finish their work.

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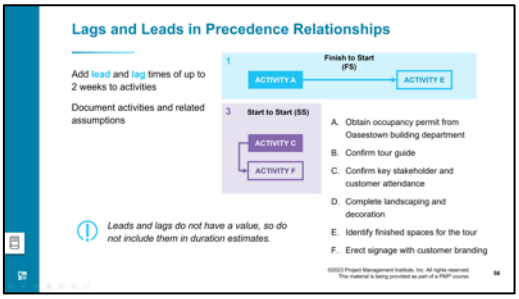


Lead:
In our example, the team wants to include time in case the agency issuing the occupancy permit is slow. So, they begin efforts to confirm receipt of occupancy permit 2 weeks **before** the team identifies finished spaces for the tour. This would be shown as a finish-to-start with a 2-week lead as shown in Section 1.

Lag:
In our example, the team starts erecting stakeholder-specific signage for the tour 2 weeks after key stakeholder and customer attendance is confirmed. Creating specialty signage takes time and is costly, so the team wants to make sure the designers have time to create something that will please the potential customers.

Lags and Leads in Precedence Relationships

Lead

_____

_____

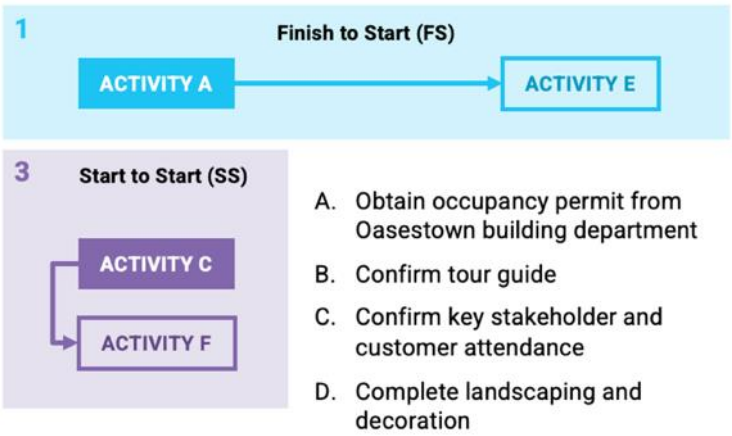
Lag

_____

_____

Guidelines:

- The use of leads and lags should not replace schedule logic.
- Duration estimates do not include any leads or lags.
- Document activities and their related assumptions.



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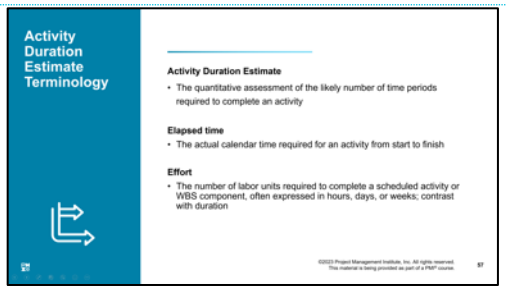

Activity Duration Estimate Terminology

Activity duration estimate

_____

_____

_____

Elapsed time

_____

_____

_____

Effort

_____

_____

_____

_____

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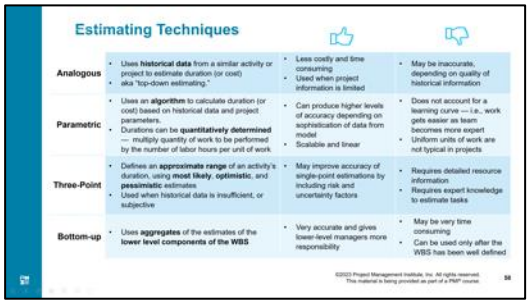

Estimating Techniques

		Advantages	Disadvantages
Analogous	Uses **historical data** from a similar activity or project to estimate duration (or cost) aka “top-down estimating.”		
Parametric	Uses an **algorithm** to calculate duration (or cost) based on historical data and project parameters. Durations can be **quantitatively determined** — multiply quantity of work to be performed by the number of labor hours per unit of work		
Three-Point	Defines an **approximate range** of an activity’s duration, using **most likely**, **optimistic**, and **pessimistic** estimates Used when historical data is insufficient, or subjective		
Bottom-up	Uses aggregates of the estimates of the lower level components of the WBS		

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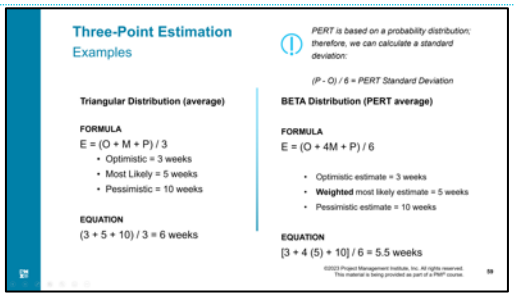

Three-Point Estimation Examples

Triangular Distribution (average)

Beta distribution (PERT average)

What is PERT?

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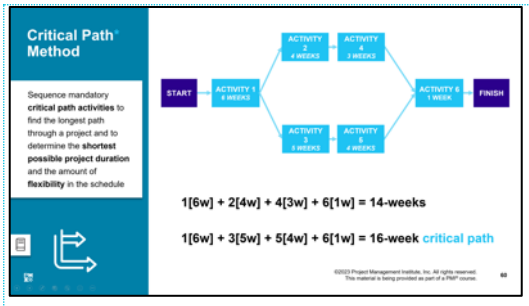


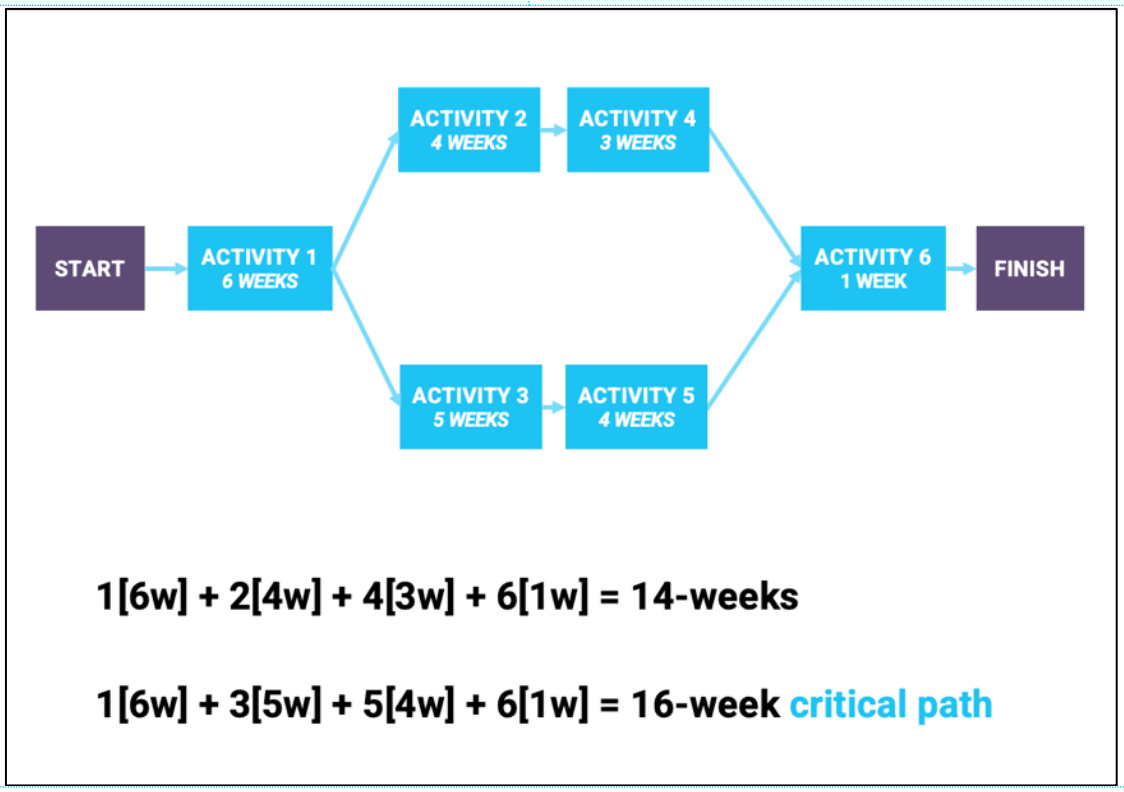
Critical Path Method

Sequence mandatory critical path activities to find the longest path through a project and to determine the shortest possible project duration and the amount of flexibility in the schedule

- Each activity is inside a box with its duration estimate.
- The arrows indicate the nature of a dependency

Process:

- Sequence mandatory **critical path activities** to find the longest path through a project and to determine the **shortest possible project duration** and the amount of **flexibility** in the schedule.
- Determine the length of each path in the diagram.
- The longest path is the critical path.



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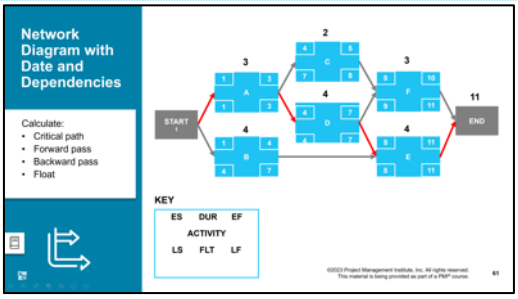

Network Diagram with Date and Dependencies

The example is explained below, for your information. However, this is automated process done with software–e.g., Primavera—and these calculations are **not required on the exam**.

Float

_____

_____

Free float will always be less than or equal to float.

Early finish date (EF)

_____

_____

Early start date (ES)

_____

_____

Late finish date (LF)

_____

_____

Late start date (LS)

_____

_____

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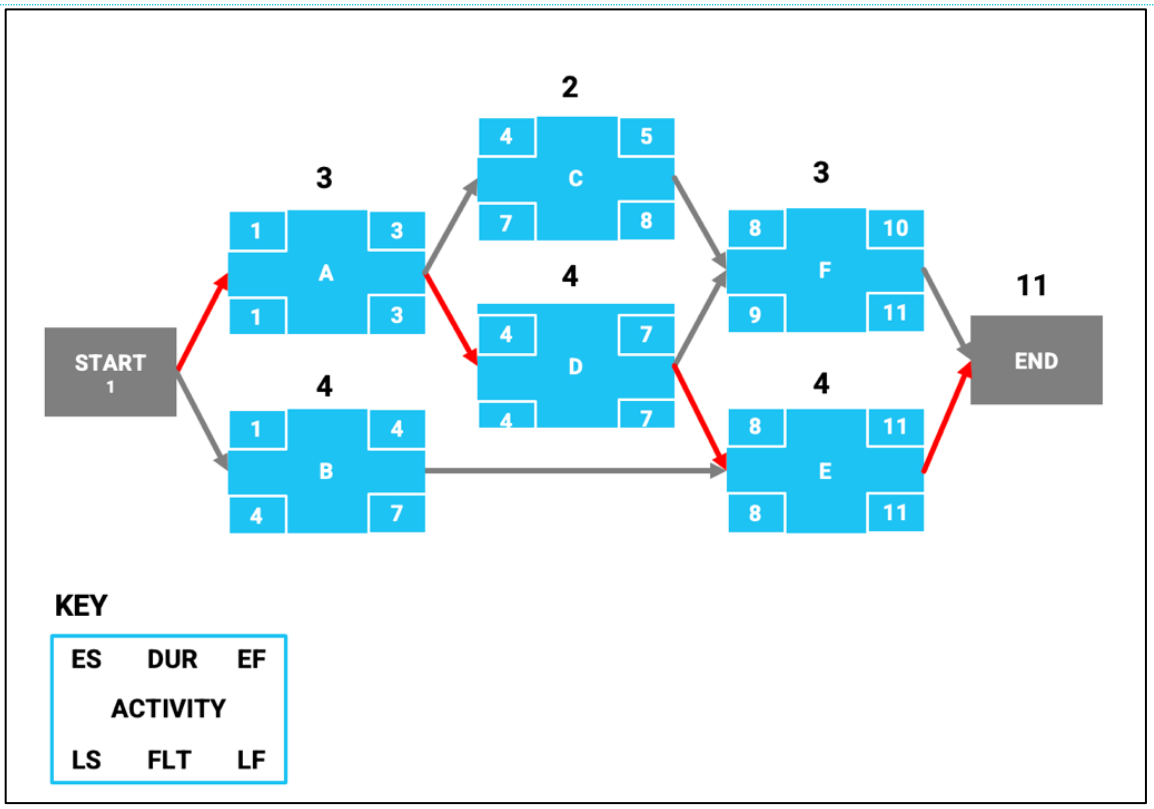

Example:

1. The first step would be to draw the diagram for the various activities noting their predecessors (arrows).
    - This will show the number of paths in the project. In this case there are four potential paths, ACF, ADF, ADE and BE.
    - By adding up the length (durations) of the various paths, the path with the longest duration is known as the critical path.
    - Remember though that there can be multiple critical paths. If the length of other paths are very close in length to the critical path, those are identified as “near” critical paths and will require monitoring by the project manager, so they do not also become a critical path.
2. The next step is to do the forward pass to determine the early start (top left of box) and early finish (top right of box) date for each activity.
3. Then perform the backward pass, the late start (bottom left) and late finish (bottom right) date can be determined.
4. The difference between the early and late dates is known as the **float** or slack for the activity (ES minus LS and EF minus LF). Activities on the critical path will have a float or slack of 0 days.

To double check on your forward and backward pass answers: the difference in days between the early and late start dates and the difference in days between the early and late finish dates should be the same number of days.

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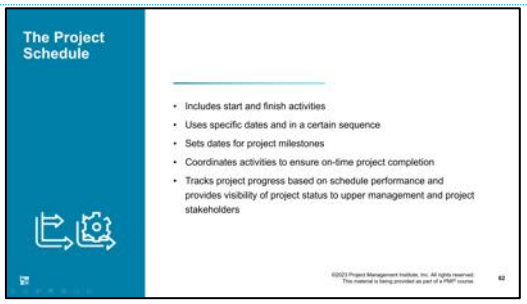
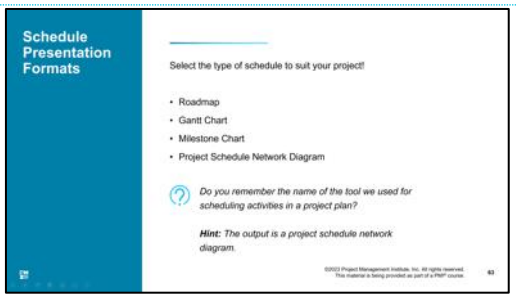
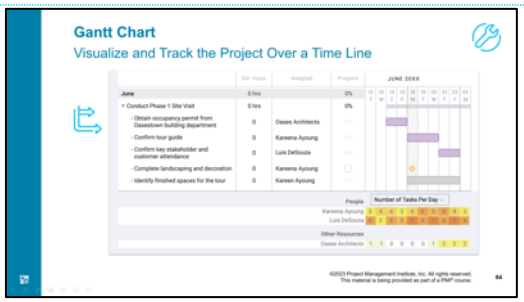


The Project Schedule



Schedule Presentation Formats

Make a list here. We'll look at a few of them next.



Gantt Chart

Visualize and track the project over a time line!

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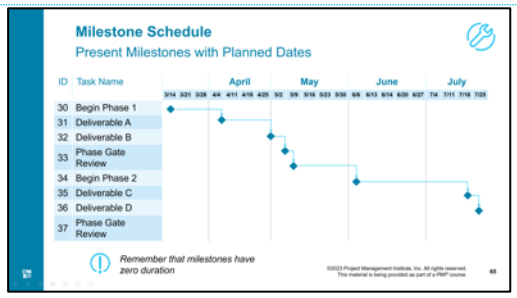
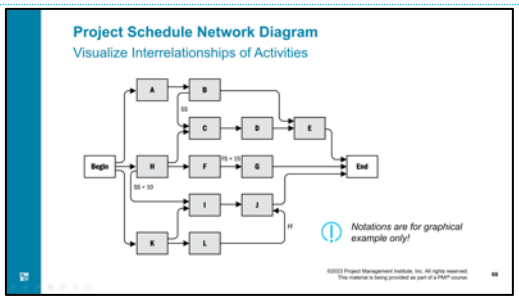
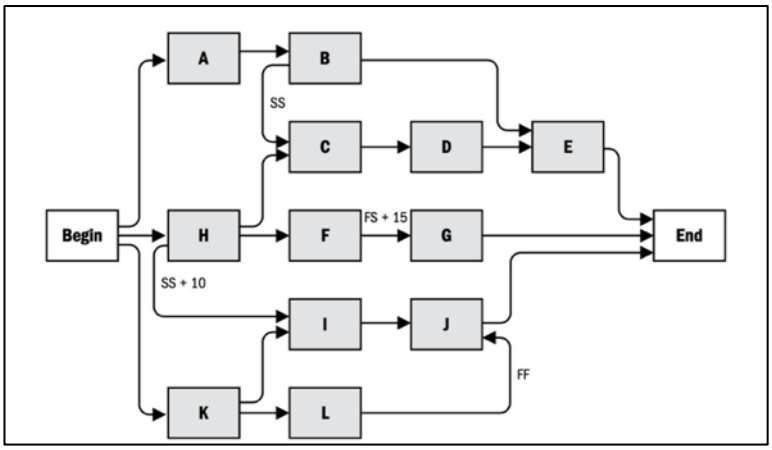


Milestone Schedule



Project Schedule Network Diagram



Visualize Interrelationship of Activities

Can you identify the elements on the diagram?

- Activities
- Dependencies
- Predecessors
- Successors

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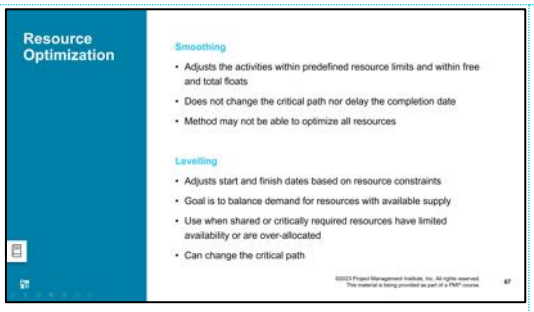


Resource Optimization

Once the schedule is mapped out on the network diagram, it's time to allocate resources.

Resource smoothing

_____

_____

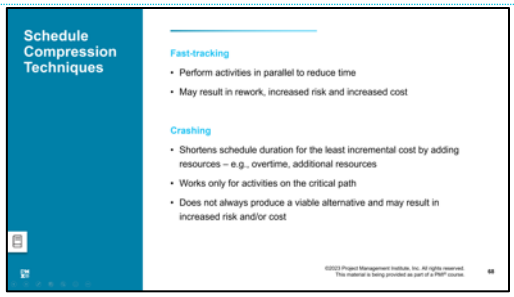
_____

Resource leveling

_____

_____

_____



Schedule Compression Techniques

Fast tracking

_____

_____

Crashing

_____

_____

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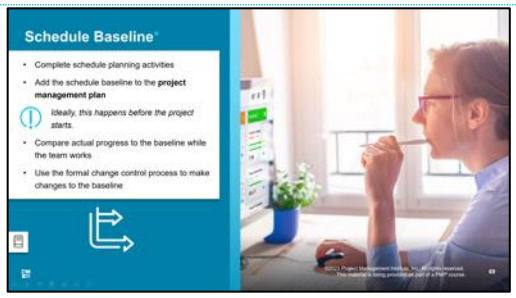


Schedule Baseline

Schedule baseline

_____

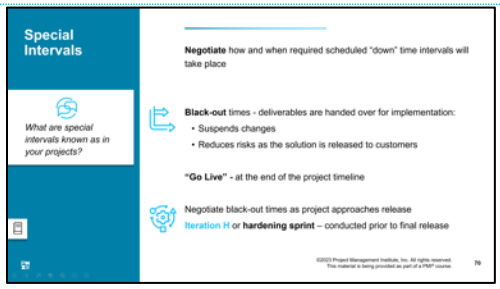
_____

_____

How can changes be made to the schedule baseline?

_____

_____



Special Intervals

Examples:

_____

_____

Does your organization/project use special intervals? Give an example.

_____

_____

Hardening Iteration/Iteration H is related to quality:

_____

_____

_____

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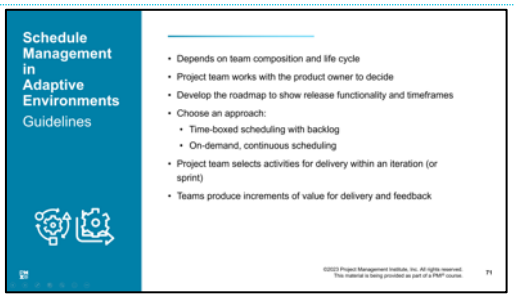
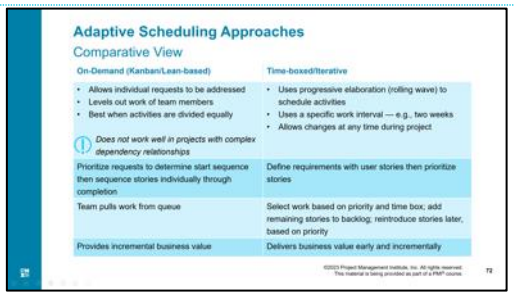


Schedule Management in Adaptive Environments: Guidelines



Adaptive Scheduling Approaches: Comparative View

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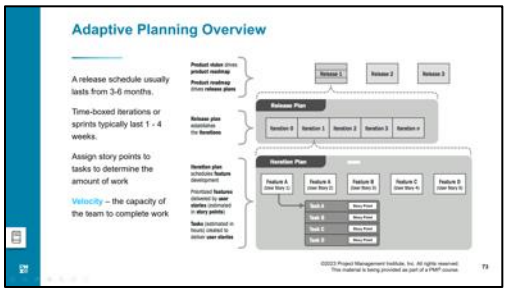
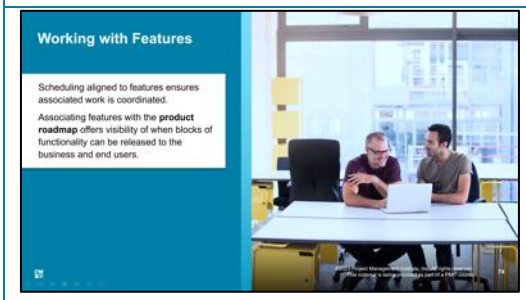


Adaptive Planning Overview

- A release schedule usually lasts from 3-6 months.
- Timeboxed iterations or sprints typically last 1 - 4 weeks.
- Assign story points to tasks to determine the amount of work.
- **Velocity** – the capacity of the team to complete work



Working with Features

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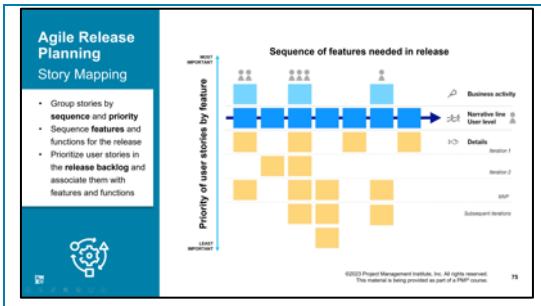
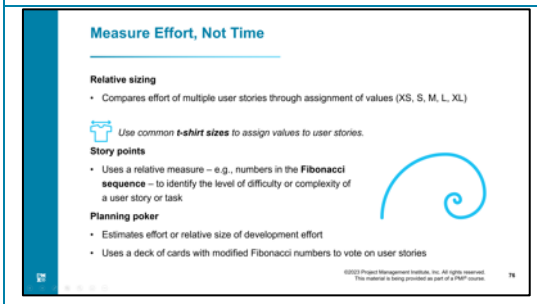


Agile Release Planning

- Group stories by **sequence** and **priority**
- Sequence **features** and functions for the release
- Prioritize user stories in the **release backlog** and associate them with features and functions



Measure Effort, Not Time

Why do we measure effort and not time?

How:

- Relative sizing
- Story points
- Planning poker

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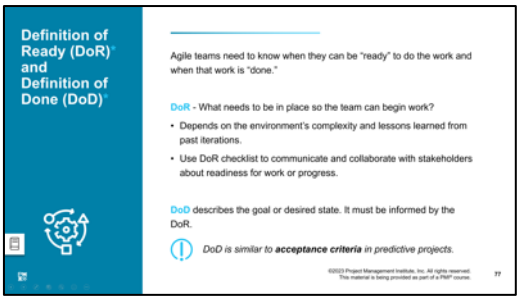
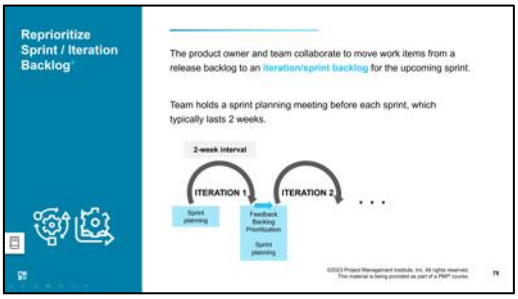


Definition of Ready (DoR) and Definition of Done (DoD)

Definition of ready (DoR)

Definition of done (DoD)



This process has also been known as 'grooming the backlog'.

Reprioritize Sprint/Iteration Backlog

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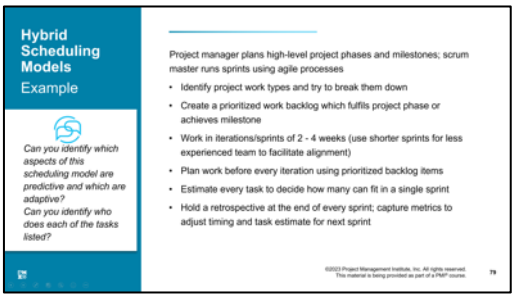


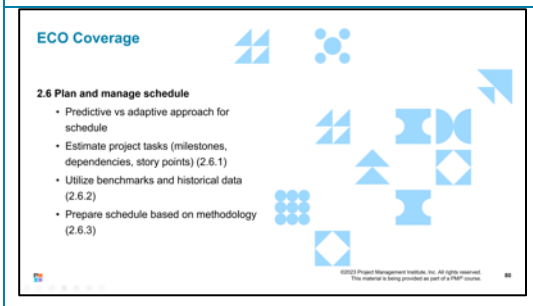
Can you identify which aspects of this scheduling model are predictive and which are adaptive?

Can you identify who does each of the tasks listed? The project manager, product owner or team?

Hybrid Scheduling Model Example

Project manager plans high-level project phases and milestones; scrum master runs sprints using agile processes.

- Identify project work types and try to break them down.
- Create a prioritized work backlog which fulfils project phase or achieves milestone.
- Work in iterations/sprints of 2 - 4 weeks (use shorter sprints for less experienced team to facilitate alignment)
- Plan work before every iteration using prioritized backlog items.
- Estimate every task to decide how many can fit in a single sprint.
- Hold a retrospective at the end of every sprint; capture metrics to adjust timing and task estimate for next sprint.



End of Topic 3C

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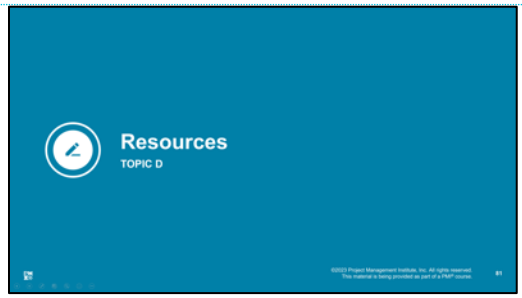
TOPIC 3D | RESOURCES

ECO Coverage

1.6 Build a team
- Deduce project resource requirements (1.6.2)

2.11 Plan and manage procurement (resources)
- Define resource requirements and needs (2.11.1)
- Communicate resource requirements (2.11.2)
- Manage suppliers/contracts (2.11.3)
- Plan and manage procurement strategy (2.11.4)
- Develop a delivery solution (2.11.5)



Topic 3D: Resources

Resources include both the people and equipment that will be needed to conduct the project activities. We also discuss how to plan for procurement of external resources in this section.

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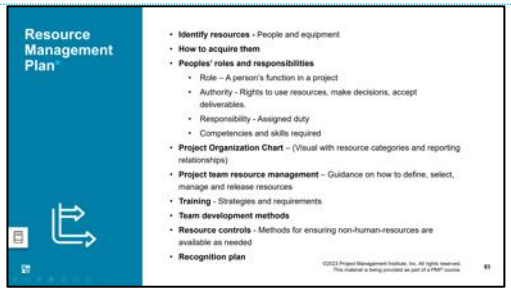
Resources: People and Equipment

_____

_____

_____

Recommended reading – *"People Management" resource on PMI.org.*



Resource Management Plan

_____

_____

_____

Take notes on what's included in the resource management plan.

Identify resources	
How to acquire them	
Peoples' roles and responsibilities	
Role	
Authority	
Responsibility	

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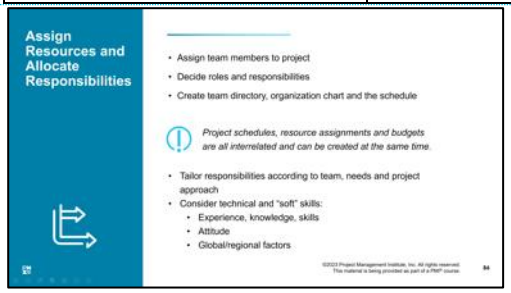
Competencies and skills required	
Project Organization Chart	
Project team resource management	
Training	
Team development methods	
Resource controls	
Recognition plan	



Assign Resources and Allocate Responsibilities

_____

_____

_____

Consider both technical and 'soft' skills and competencies

_____

_____

_____

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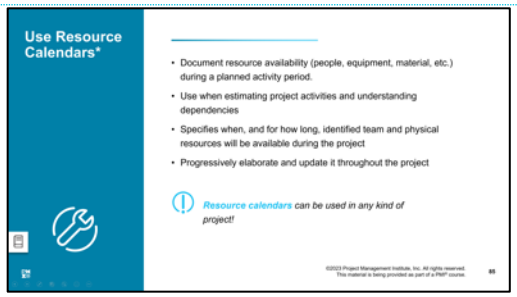


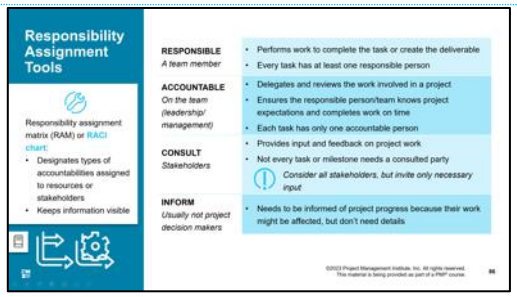
Use Resource Calendars

Resource calendar definition and use:

_____

_____

_____



Responsibility Assignment Tools

Responsibility assignment matrix (RAM):

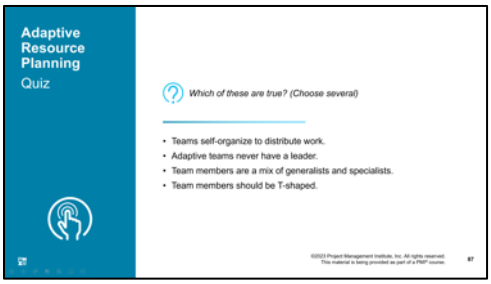
_____

_____

_____

Fill in the category descriptions of the RACI chart.

Responsible	
Accountable	
Consulted	
Informed	



Adaptive Resource Planning Quiz

You should have done this quiz in class.

Which of these are true? (Choose several)

- Teams self-organize to distribute work.
- Adaptive teams never have a leader.

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	• Team members are a mix of generalists and specialists. • Team members should be T-shaped.
Quiz answer	All are ‘true’ except “Adaptive teams never have a leader.” Teams self-organize, and hybrid teams can have a centralized management model with a project manager or a team lead. ‘Never’ is incorrect here, because it can be useful to have a team lead, an agile coach, a facilitator, and so on. Another way of answering this is to say that everyone is a leader—a servant leader

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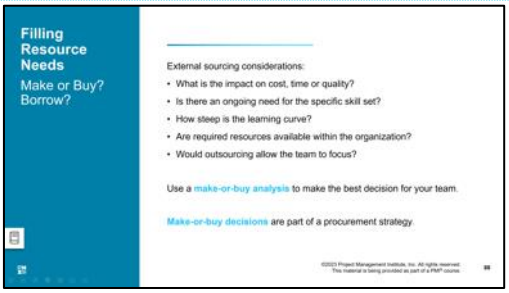
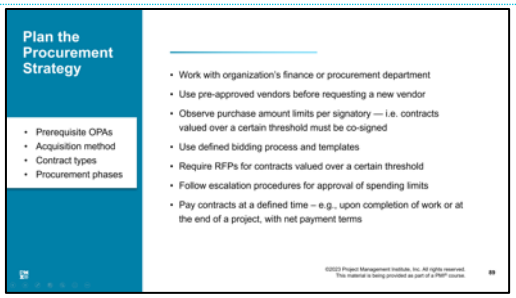


Filling Resource Needs: Make or Buy? Borrow?

Make-or-buy-analysis

Make-or-buy-decisions



Plan the Procurement Strategy

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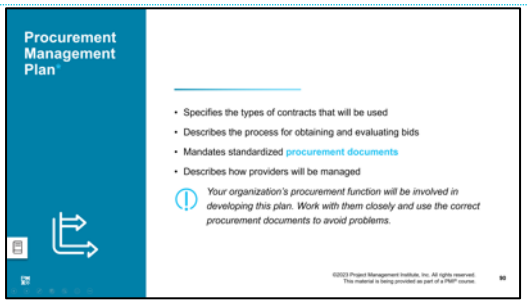


Procurement Management Plan

Define/describe:

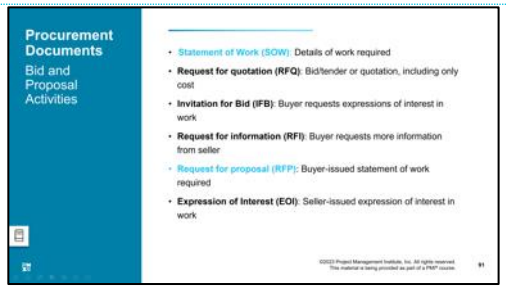
_____

_____

_____

_____

_____



Procurement Documents: Bid and Proposal Activities

_____

_____

_____

Statement of work

_____

_____

_____

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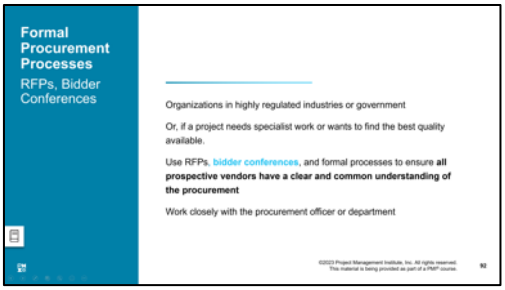
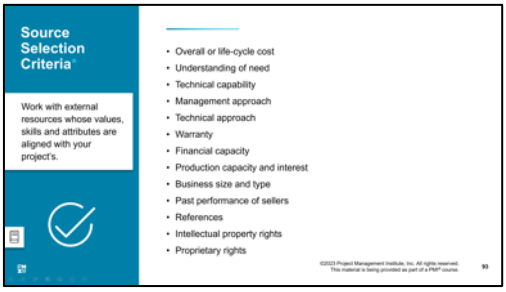


Formal Procurement Processes: RFPs, Bidder, Conferences

Request for proposal (RFP)

Bidder conferences



Source Selection Criteria

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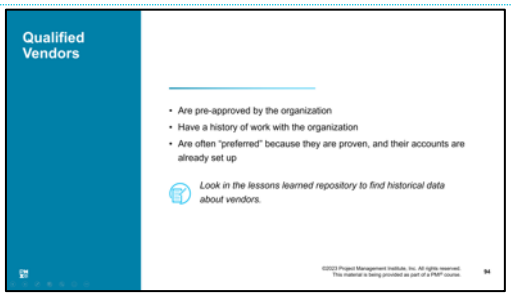
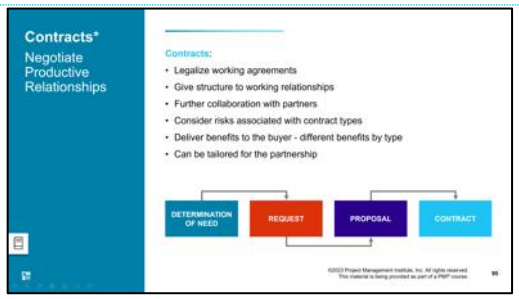


Qualified Vendors



Contracts: Negotiate Productive Relationships

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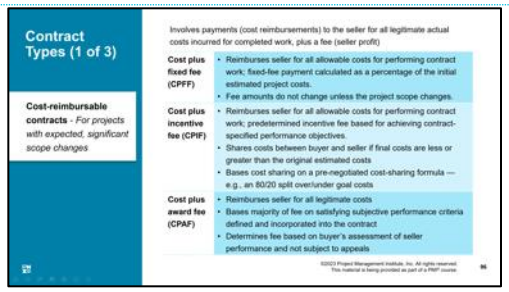


Contract Types (1 of 3)

Cost-reimbursable contracts

_____

_____

Cost plus fixed fee (CPFF)

_____

_____

Cost plus incentive fee (CPIF)

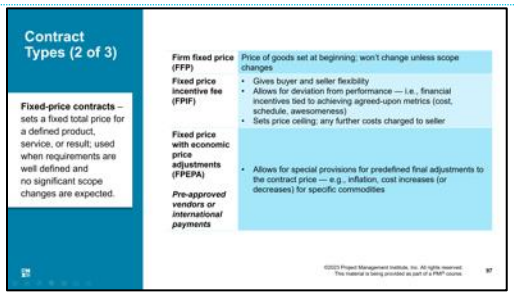
_____

_____

Cost plus award fee (CPAF)

_____

_____



Contract Types (2 of 3)

Fixed-price contracts

_____

_____

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Firm fixed price (FFP)

_____

_____

Fixed price incentive fee (FPIF)

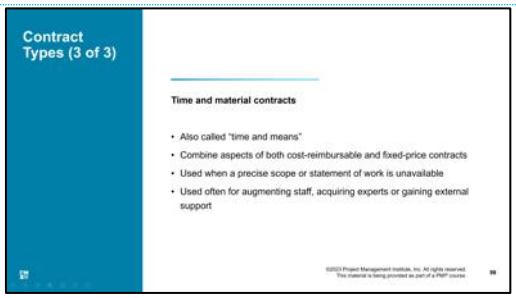
_____

_____

Fixed price with economic price adjustments (FPEPA)

_____

_____



Contract Types (3 of 3)

Time and materials contracts

_____

_____

_____

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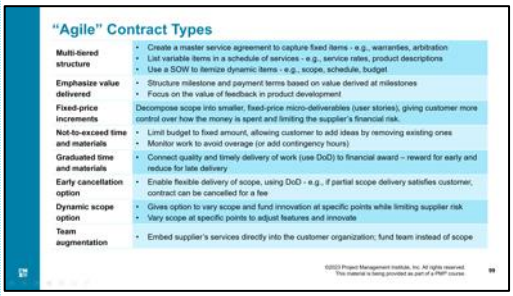

"Agile" Contract Types

- *Tailor contracts to suit needs.*
- *These contract types are not exclusive to agile projects.*

The Agile Practice Guide – pp 77-78

Multi-tiered structure	
Emphasize value delivered	
Fixed-price increments	
Not-to-exceed time and materials	
Graduated time and materials	
Early cancellation option	
Dynamic scope option	
Team augmentation	

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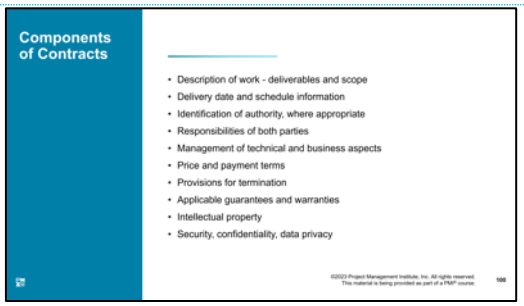
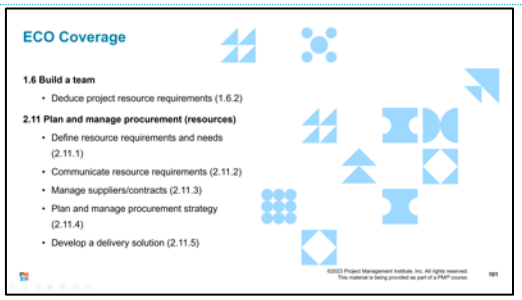


Components of Contracts



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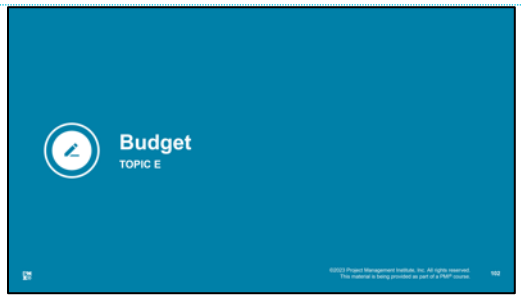
TOPIC 3E | BUDGET

ECO Coverage

2.5 Plan and manage budget and resources

- Estimate budgetary needs based on the scope of the project and lessons learned from past projects (2.5.1)
- Anticipate future budget challenges (2.5.2)
- Plan and manage resources (2.5.4)



Topic 3E: Budget

In this area of planning, you determine the budget/finance structure, relationships and amounts for your project.

Will you be aligning a budget with scope and schedule requirements in a predictive life cycle?

Or collaborating with partners and internal finance stakeholders to craft a suitable financial solution, as the agile mindset suggests?

It's likely a combination of both! We'll look at both approaches and show the benefits of tailoring a budget.

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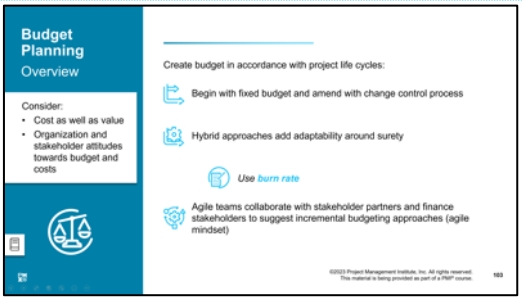


Budget Planning: Overview

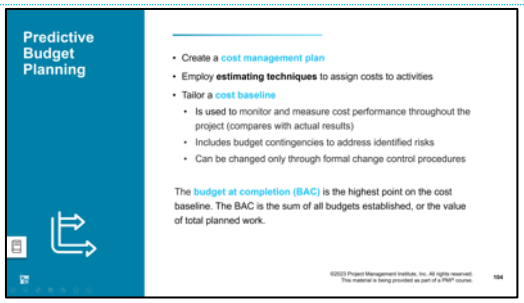
Burn rate

_____

_____

Consider:

- Cost as well as value
- Organization and stakeholder attitudes towards budget and costs



Predictive Budget Planning

Cost management plan

_____

_____

_____

Cost baseline

_____

_____

_____

_____

_____

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Budget at completion (BAC)

_____

_____

Cost baseline

_____

_____

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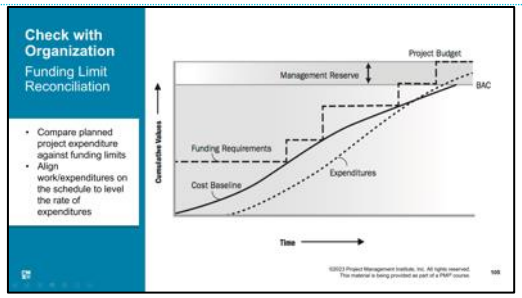

Check with Organization: Funding Limit Reconciliation

_____

_____

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_____

Historical Data: Start with What's Known

_____

_____

_____

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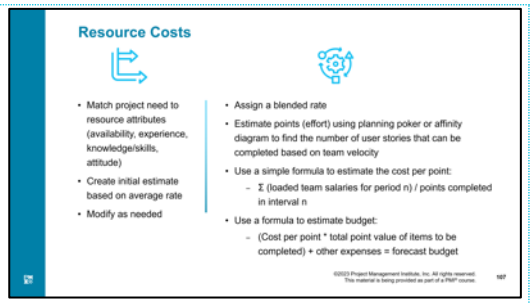
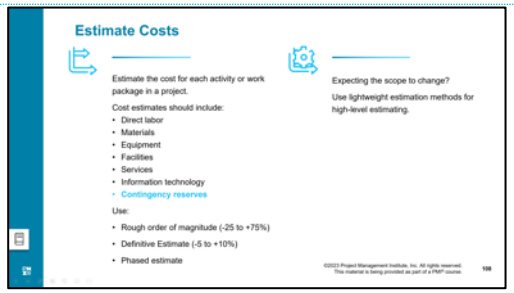


Resource Costs

Predictive

Adaptive



Estimate Costs

Predictive

Adaptive

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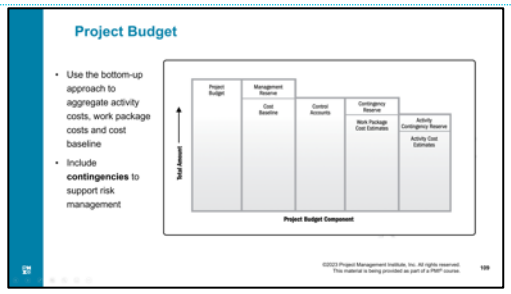
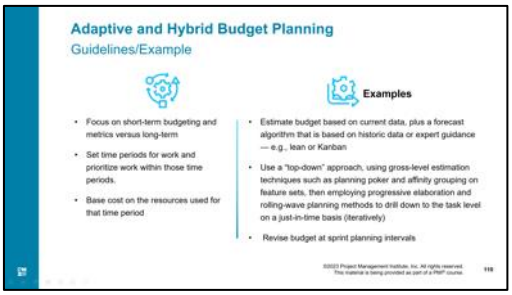


Project Budget



Adaptive and Hybrid Budget Planning: Guidelines/Example

Adaptive

Hybrid

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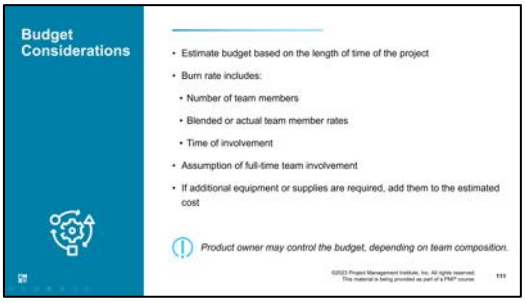
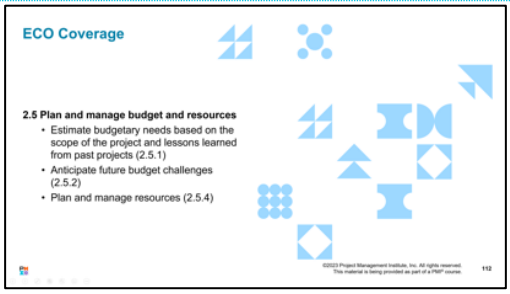


Budget Considerations



End of Topic 3E

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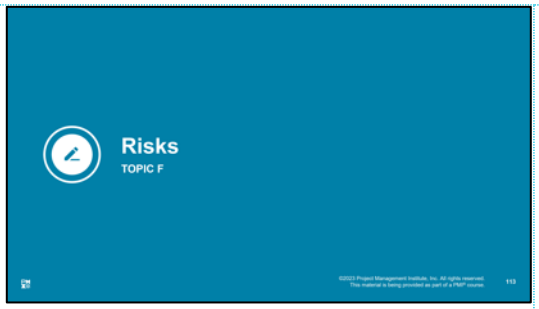
TOPIC 3F | RISKS

ECO Coverage

2.3 Assess and manage risks
- Determine risk management options (2.3.1)
- Iteratively assess and prioritize risks (2.3.2)

3.1 Plan and manage project compliance.
- Determine necessary approach and action to address compliance needs (risk, legal) (3.1.6)
- Determine potential threats to compliance (3.1.3)



Topic 3F: Risks

Things will go wrong on a project.

However, rather than being reactive to risk, we can be prepared with a strategy, a toolkit of possible responses and a growth mindset to be proactive about risk planning.

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Risk: Conditions of Uncertainty

Trigger condition

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Opportunity

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Threat

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Issue

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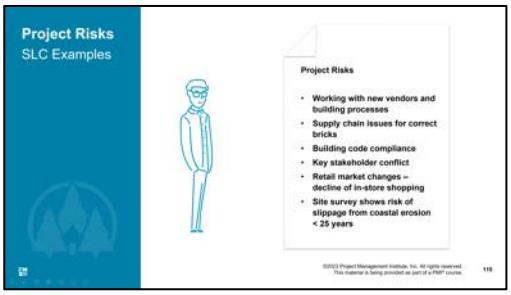


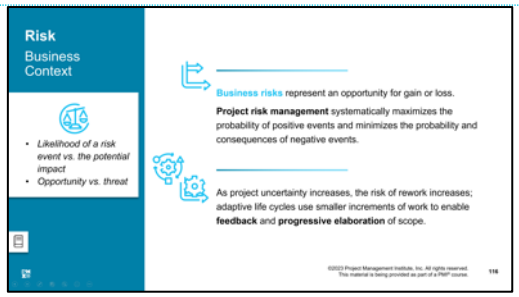
This example relates to the optional Shawpe (SLC) case study exercise (self-study) included with this course.

Project Risks SLC Example

Project Risks

- Working with new vendors and building processes
- Supply chain issues for correct bricks
- Building code compliance
- Key stakeholder conflict (Josie Bynoe)
- Retail market changes – decline of in-store shopping
- Site survey shows risk of slippage from coastal erosion < 25 years

This is a list of project risks, identified by the project manager and the team before the project starts.



Risk: Business Context

Business risk

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Likelihood vs. probability

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Opportunity vs. threat

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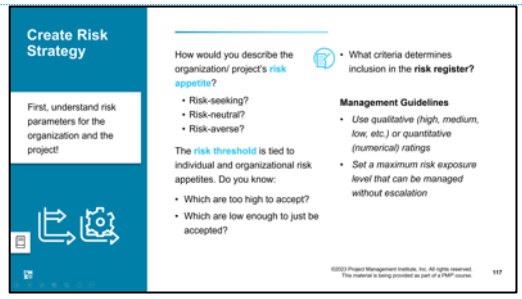

Create Risk Strategy

Include data and attitudes of the organization as well as the project.

- Risk appetite

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- Risk threshold

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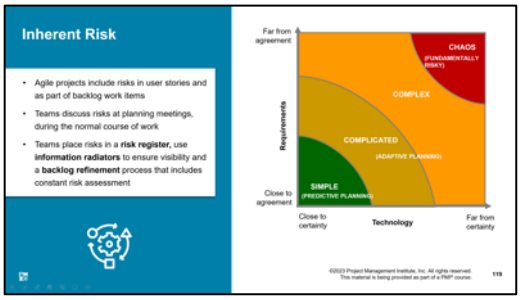
Define/Refine Risk Management Approach

Factor in project characteristics:

- Size
- Complexity
- Importance
- Development approach
- Risk management plan



Stacey diagram

Inherent Risk

Describe how Agile teams approach inherent risk:

How do we calculate or determine inherent risk?

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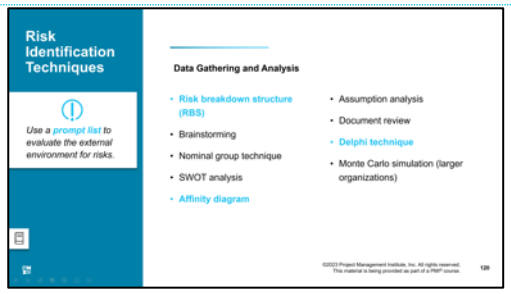

Risk Identification Techniques

Prompt list

Risk breakdown structure (RBS)

Affinity diagram

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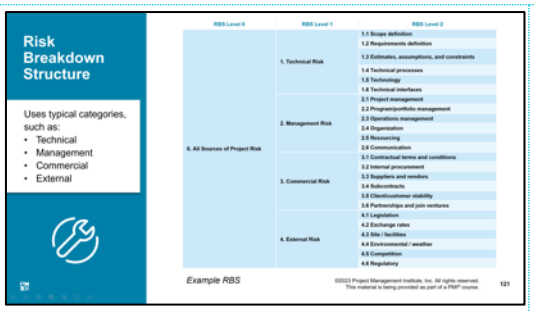
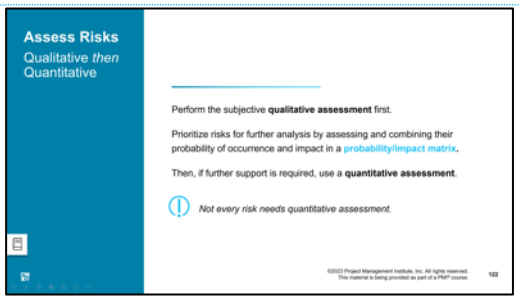
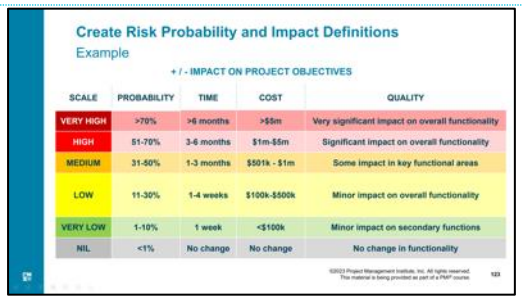


Risk Breakdown Structure



Assess Risks: Qualitative *then* Quantitative



Create Risk Probability and Impact Definitions

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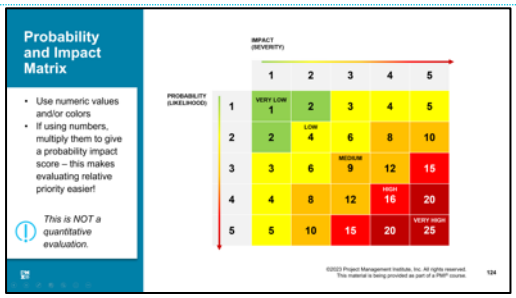
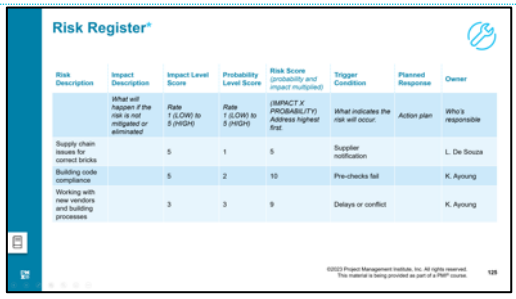


Probability and Impact Matrix



Risk Register: Example

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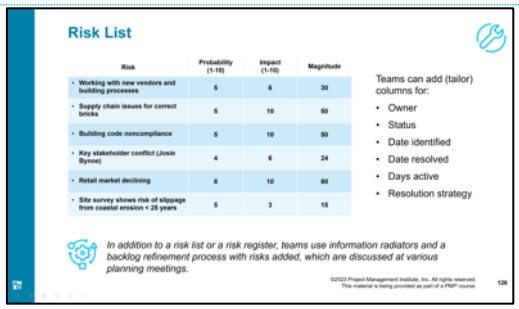
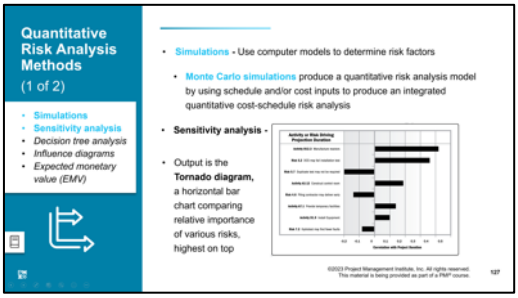


Risk List (Example)



(1 of 2)

Quantitative Risk Analysis Methods

Simulation

Monte Carlo simulation (risk analysis)

Sensitivity analysis

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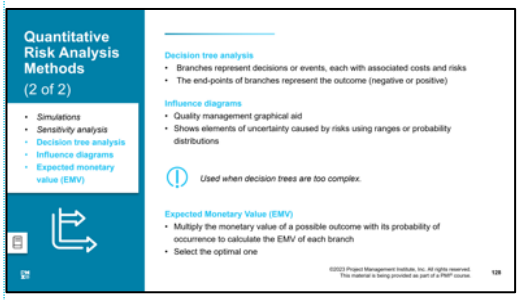

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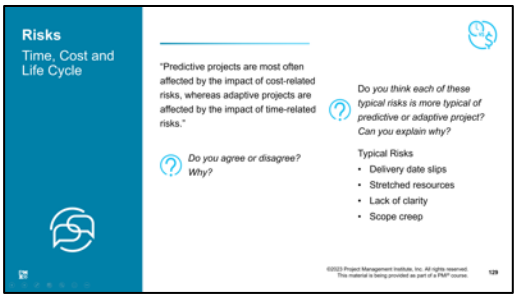
Decision tree analysis

Influence diagram

Expected monetary value (EMV)



Delivery date slips:
Though adaptive projects use a dynamic scheduling model, controlling work in sprints/iterations using cadences and timeboxing, it's possible that customers want teams to work even faster, or the schedule rolls on and on with no "end" in sight from stakeholders' points of view.

Risks: Time, Cost and Life Cycle

Read this list of typical risks and think about how the project's life cycle affects the probability or severity of that risk. We did the first one for you (at left).

Example risks:

- Delivery date slips
- Stretched resources
- Lack of clarity
- Scope creep

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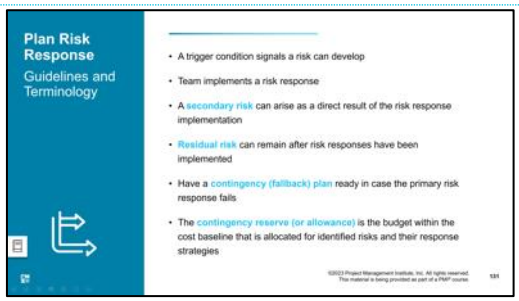
Risk Response: Good Practice



Plan Risk Response: Guidelines and Terminology

Secondary risk

Residual risk

Contingency plan

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Contingency reserve

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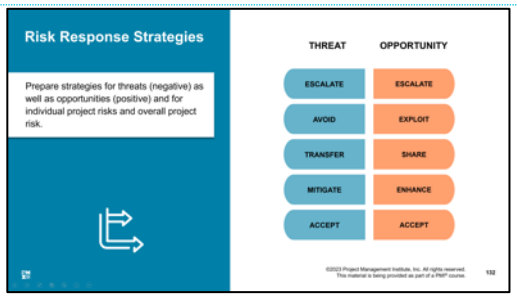

Risk Response Strategies

Threat

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Opportunity

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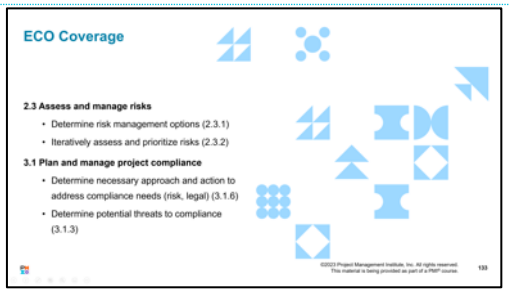

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TOPIC 3G | QUALITY

ECO Coverage

2.7 Plan and manage quality of products/deliverables
- Determine quality standard required for project deliverables (2.7.1)

3.1 Plan and manage project compliance
- Use methods to support compliance (3.1.4)
- Measure the extent to which the project is in compliance (3.1.7)

Topic 3G: Quality

Planning for quality applies to the outcomes and deliverables as well as the processes used in the project.

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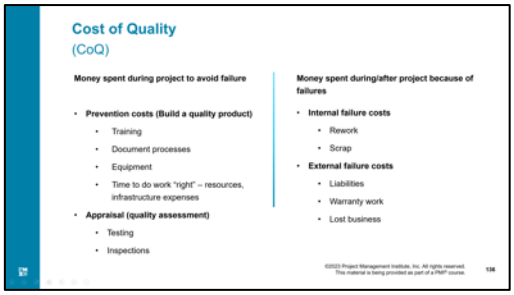
Quality



Cost of Quality (CoQ)

Cost of Quality is based on Philip Crosby's Quality is Free.

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Stakeholder and Customer Expectations of Quality

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Quality management plan

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Quality policy

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Product/deliverable

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Processes

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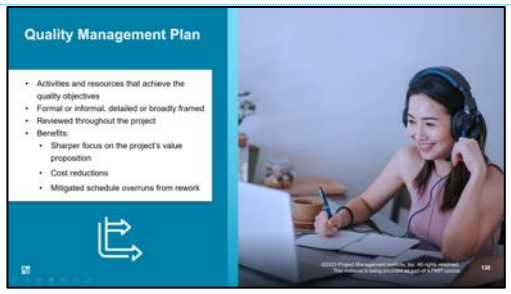

Quality Management Plan

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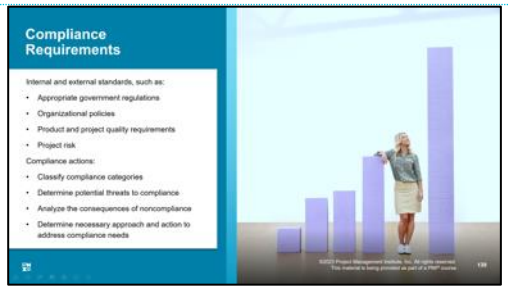

Compliance Requirements

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Internal and external standards, such as:

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Compliance actions

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Quality Standards and Regulation

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What standards are relevant in your industry?

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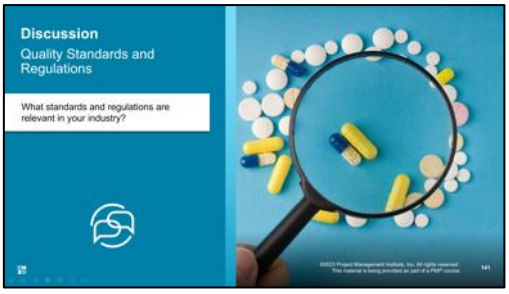

Discussion: Quality Standards and Regulations

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Note your and other participant responses to this discussion question, as it helps you to frame project management content in scenario format.

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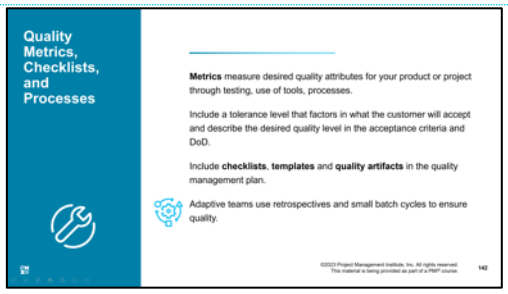
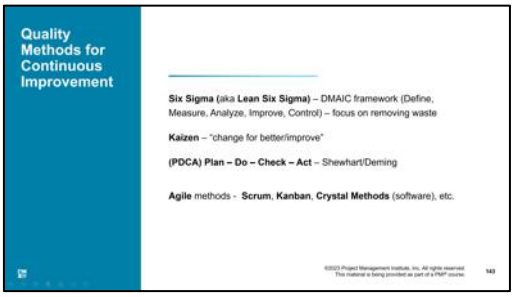


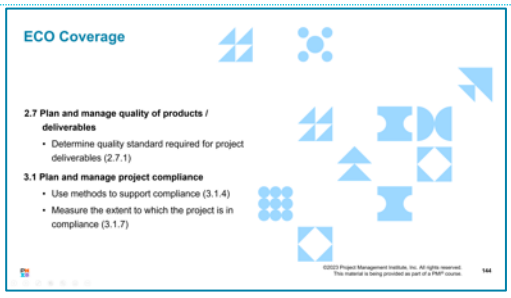
Quality Metrics, Checklists and Processes



Quality Methods for Continuous Improvement

- Six Sigma (aka Lean Six Sigma) – DMAIC framework
- **Kaizen** – "change for better/improve"
- (PDCA) Plan – Do – Check – Act – Shewhart/Deming
- Agile methods - Scrum, Kanban, Crystal Methods

Lesson 5 delivers a more detailed look at continuous improvement. We recommend reading ahead about the methods listed on this page.



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TOPIC 3H | INTEGRATE PLANS

ECO Coverage

2.9 Determine appropriate project methodology/ methods and practices
- Consolidate the project/phase plans (2.9.1)
- Assess consolidated project plans for dependencies, gaps, and continued business value (2.9.2)
- Analyze the data collected (2.9.3)
- Collect and analyze data to make informed project decisions (2.9.4)
- Determine critical information requirements (2.9.5)

2.10 Manage project changes
- Determine strategy to handle change (2.10.2)

Topic 3H: Integrate Plans

Finally, project professionals integrate all planning activities to support the activities to deliver the vision and expected value. The key to doing this as seamlessly as possible is having an effective strategy for **change management**.

This topic addresses both the predictive process of project plan integration and change management that is required of all projects.

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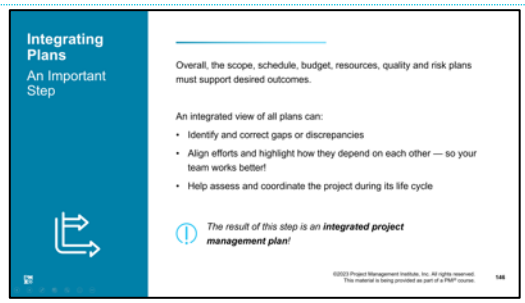

Integrating Plans: An Important Step

Why is plan integration important? Explain.

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Integrated project management plan

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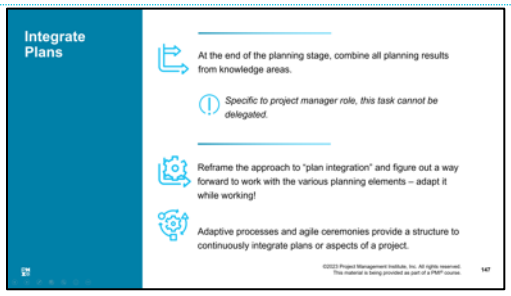

Integrate Plans

Describe plan integration in a predictive approach.

_____

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What do we mean by reframing the approach to plan integration in hybrid approaches?

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How do adaptive projects provide a structure for integrated planning?

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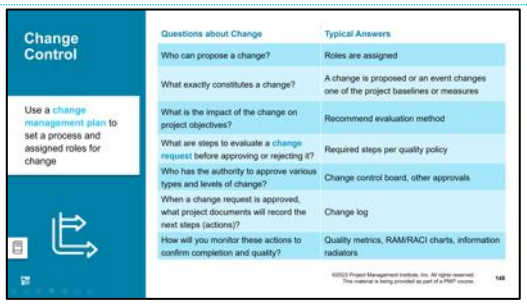

Change Control

Use a change management plan to set a process and assigned roles for change.

Change management plan

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Change request (CR)

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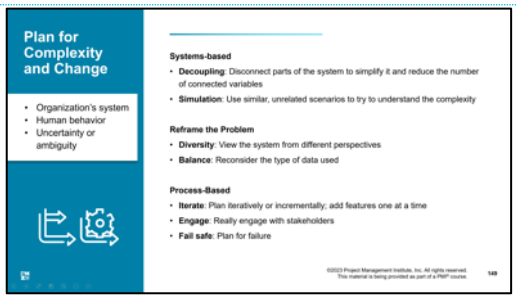

Plan for Complexity and Change

- Organization's system
- Human behavior
- Uncertainty or ambiguity

Systems-based

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Reframe the problem

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Process-based

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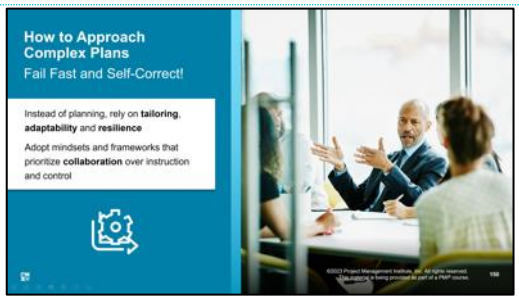
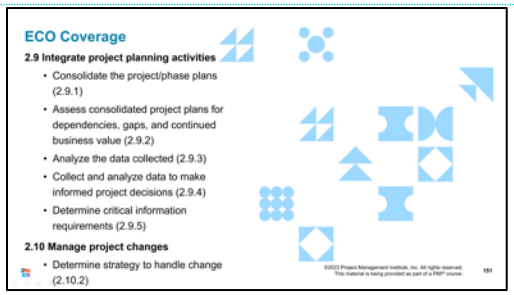


How to Approach Complex Plans: Fail Fast and Self-Correct!



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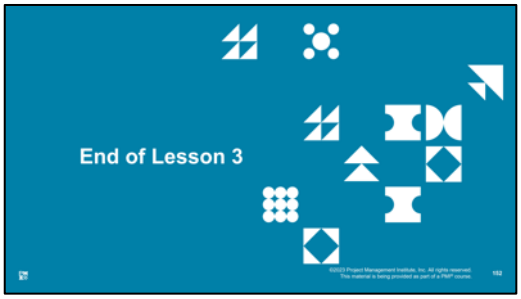

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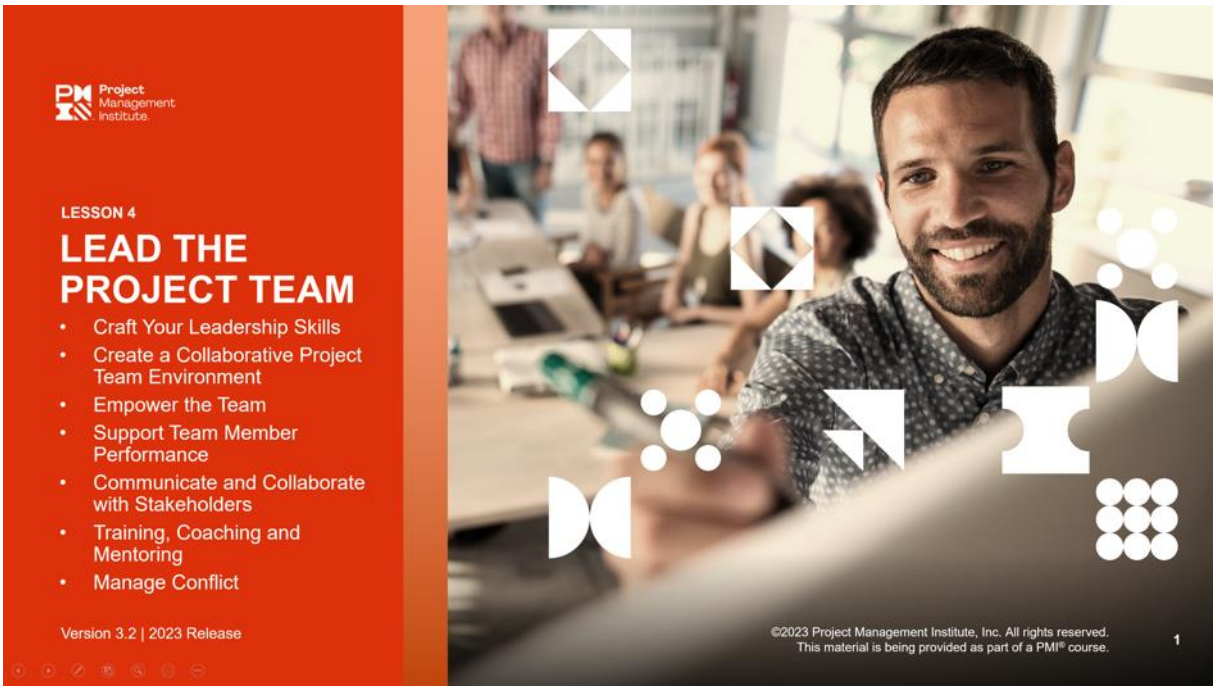

LESSON 4 | LEAD THE PROJECT TEAM

Description

There are many ways to lead a team. No one approach is perfect for every situation. The appropriate leadership style depends on the situation, the project, the stakeholders, your skills, and many other factors. Project professionals must be astute in various leadership styles to apply and knowledgeable about tailoring leadership to the team and project needs.

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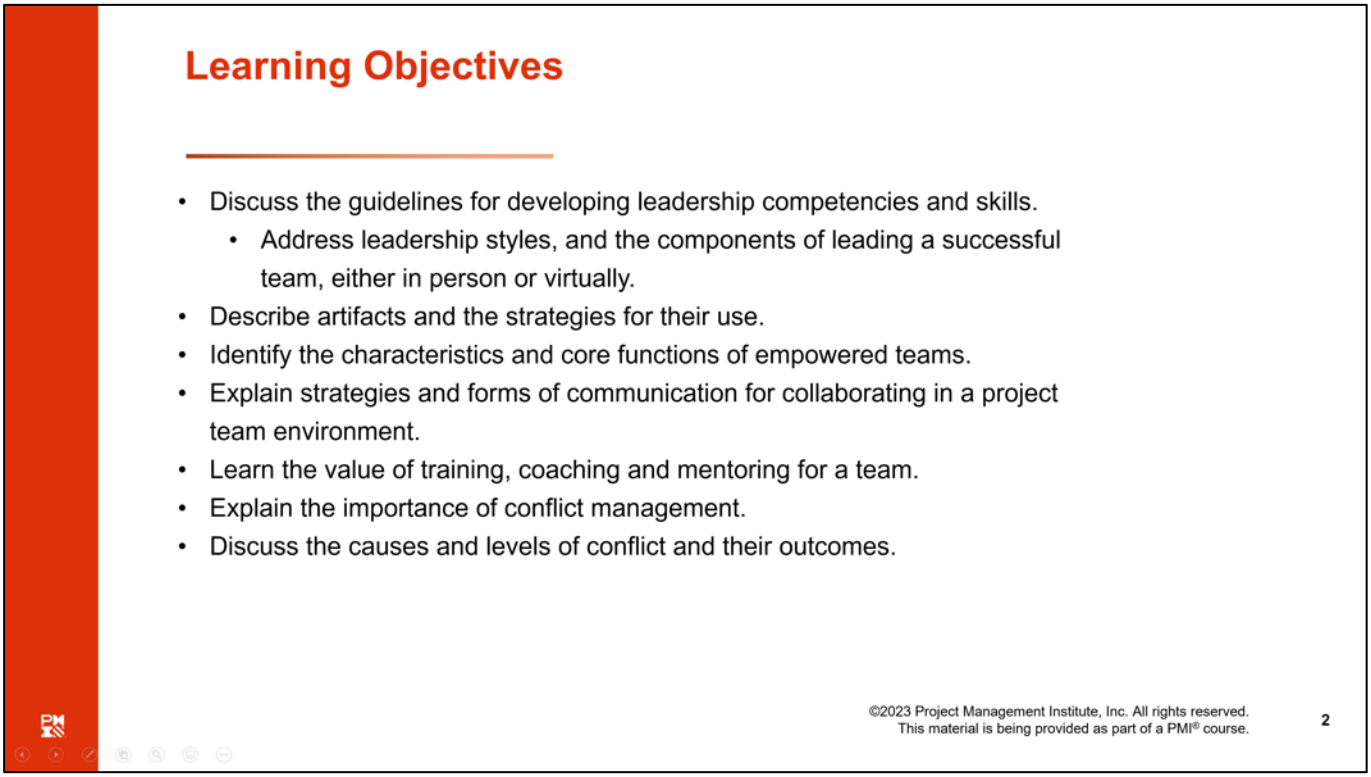

Topics

A. Craft Your Leadership Skills
B. Create a Collaborative Project Team Environment
C. Empower the Team
D. Support Team Member Performance
E. Communicate and Collaborate with Stakeholders
F. Training, Coaching and Mentoring
G. Manage Conflict

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Lesson 4 Notes

TOPIC 4A | CRAFT YOUR LEADERSHIP SKILLS

ECO Coverage

1.2 Lead a team

- Value servant leadership (e.g., relate the tenets of servant leadership to the team) (1.2.3)
- Determine an appropriate leadership style (e.g., directive, collaborative) (1.2.4)
- Distinguish various options to lead various team members and stakeholders (1.2.7)

1.11 Engage and support virtual teams

- Implement options for virtual team member engagement (1.11.3)

Topic 4A: Craft Your Leadership Skills

Teams are made up of individuals with different skill sets, backgrounds, experiences, and attitudes.

Cohesive, collaborative teams typically are productive and effective. Leadership is a trait required of everyone on the project team. If you are the project manager or team lead, then you also need to lead on leadership!

This topic corresponds to the “People” domain of the ECO and the “Power Skills” side of the PMI® Talent Triangle.

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Power Skills

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What are your strongest and weakest leadership skills?

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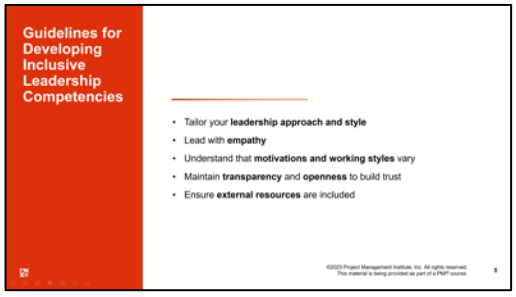

Guidelines for Developing Inclusive Leadership Competencies

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Leadership Skills and Competencies

- Communication
- Conflict management
- Critical thinking
- Cultural awareness
- Decision-making
- Emotional Intelligence Technique (EQ or EI)
- Ethical approach (PMI Code of Ethics and Professional Conduct)
- Expert judgment
- Facilitation
- Meeting management
- Negotiation
- Networking
- Team building

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Interpersonal and Team Skills

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Active listening

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_____

Communication styles assessment

_____

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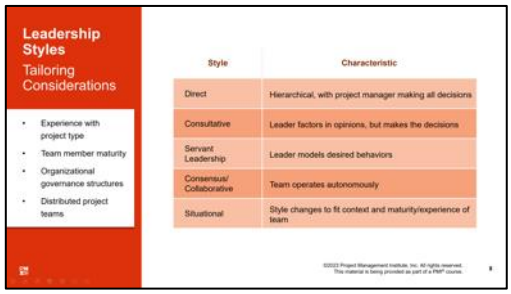

Fill in the chart about leadership style characteristics.

Leadership Styles: Tailoring Considerations

- Experience with project type
- Team member maturity
- Organizational governance structures
- Distributed project teams

_____

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Leadership Style	Characteristics
Direct	
Consultative	
Servant Leadership	
Consensus/ collaborative	
Situational	

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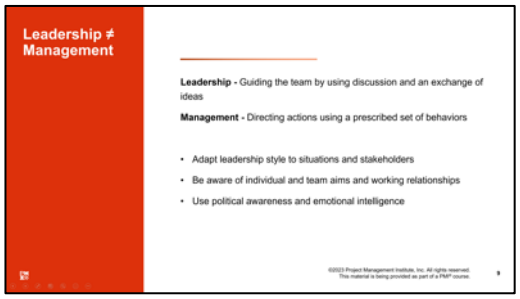

Leadership ≠ Management

What are the differences between these concepts?

_____

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We have introduced servant leadership already, so you can use this opportunity to focus on specific leadership tasks associated with the role.

Servant Leadership

Do you perform as a servant leader at work? How have others demonstrated servant leadership traits?

_____

_____

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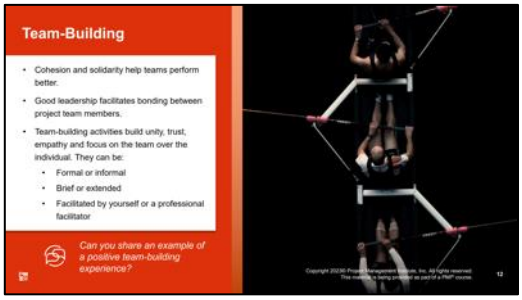
Adopt a Growth Mindset

Growth mindset



Team Building

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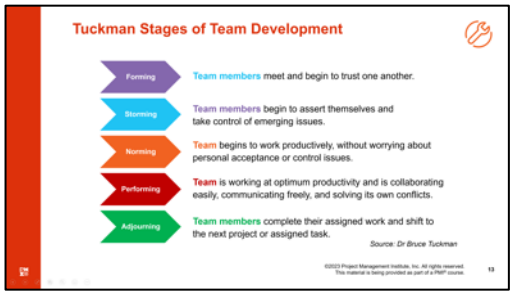

Remember the Tuckman's Stages?

Let's review them quickly!

Tuckman's Stages of Team Development (Review)

Forming

_____

_____

Storming

_____

_____

Norming

_____

_____

Performing

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_____

Adjourning

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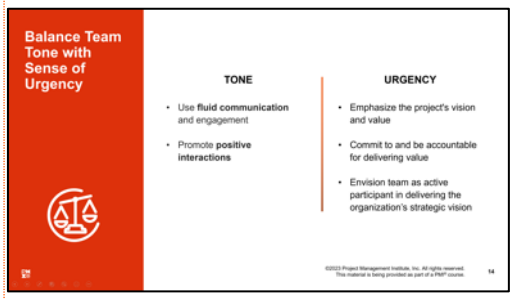

How do you strike the balance between a positive team tone and fostering the appropriate sense of urgency?

Balance Team Tone with Sense of Urgency

Tone

_____

_____

Urgency

_____

_____

How can you create a balance?

_____

_____

_____

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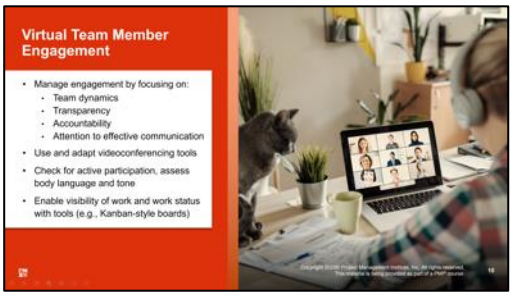
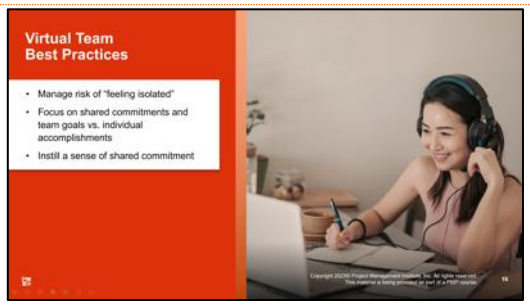
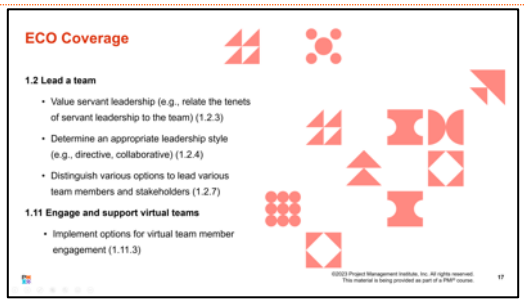


Virtual Team Member Engagement



Virtual Team Member Best Practices



End of Topic 4A

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TOPIC 4B | CREATE A COLLABORATIVE PROJECT TEAM ENVIRONMENT

ECO Coverage

2.12 Manage project artifacts

- Determine the requirements (what, when, where, who) for managing the project artifacts (2.12.1)
- Validate that the project information is kept up to date (i.e., version control) and accessible to all stakeholders (2.12.2)

Topic 4B: Create a Collaborative Project Team Environment

We just discussed leading the people in your project. Now let's look at best practices for ensuring work can happen smoothly. This topic includes creating a structure for physical and virtual working, including workspace management, project artifact and document creation, and configuration management.

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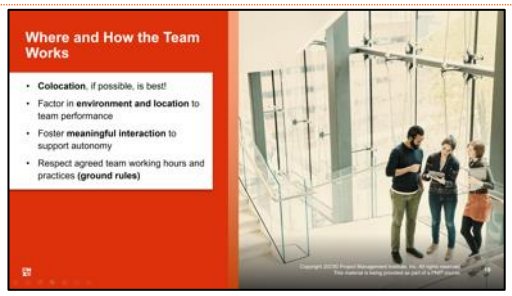

Where and How the Team Works

Prioritize:

- Colocation
- Environment
- Meaningful interaction
- Ground rules

_____

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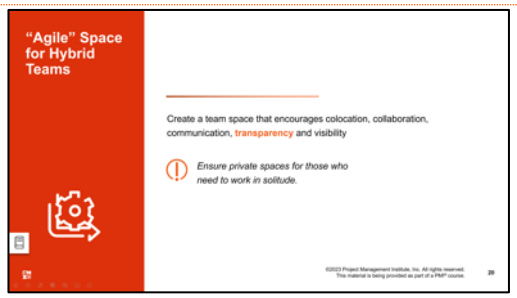

"Agile" Space for Hybrid Teams

- Colocation
- Collaboration
- Communication
- Transparency
- Visibility

_____

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Explain the importance of transparency/visibility:

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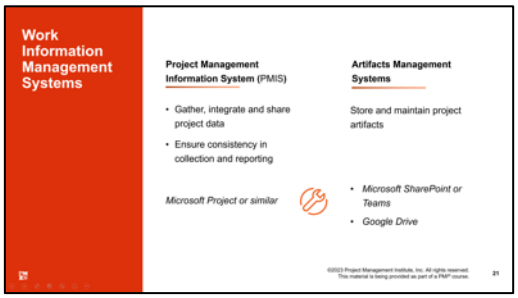
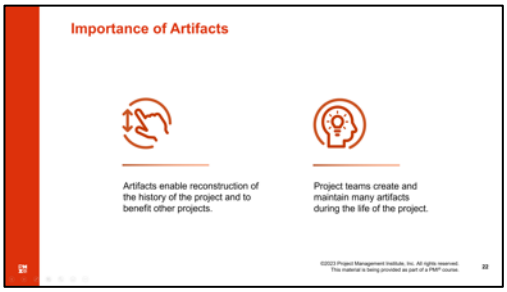


Work Information Management Systems

Project management information systems (PMIS)

Artifact management systems



Importance of Artifacts

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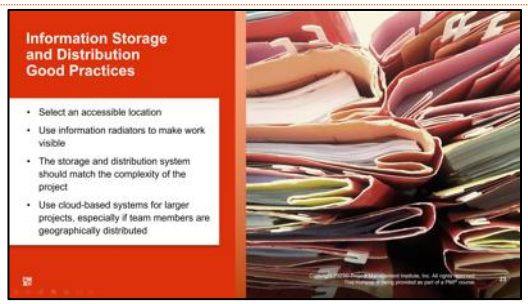
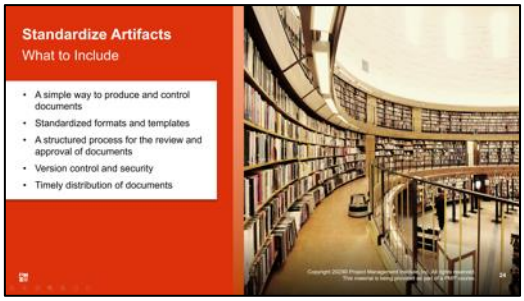


Information Storage and Distribution Good Practices



Standardize Artifacts: What to Include

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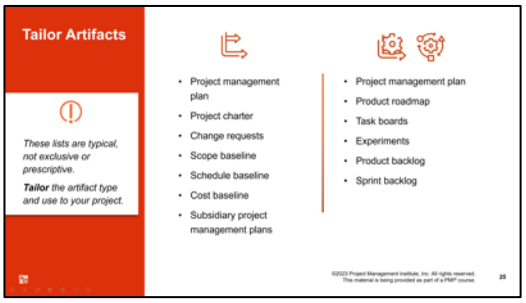
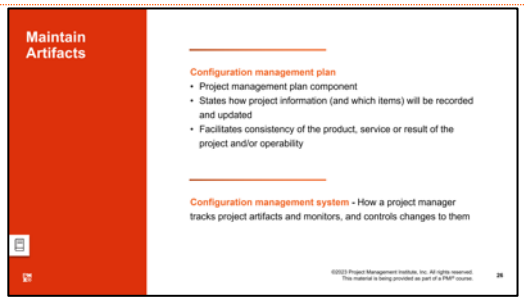


Tailor Artifacts

Predictive

Hybrid/Adaptive



Maintain Artifacts

Configuration management plan

Configuration management system

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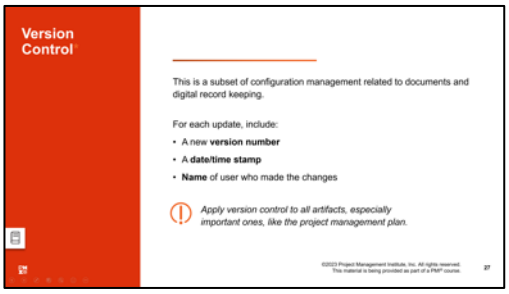
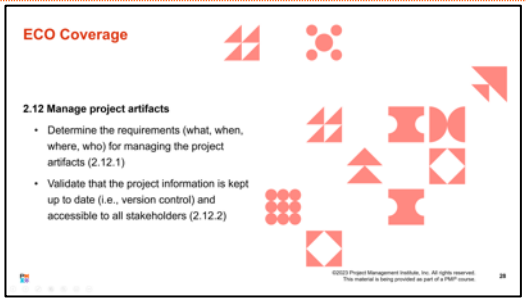


Version Control

Definition and use:



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TOPIC 4C | EMPOWER THE TEAM

ECO Coverage

1.2 Lead a team
- Support diversity and inclusion (e.g., behavior types, thought process) (1.2.2)
- Inspire, motivate, and influence team members/stakeholders (e.g., team contract, social contract, reward system) (1.2.5)

1.4 Empower team members and stakeholders
- Determine and bestow level(s) of decision-making authority (1.4.4)

Topic 4C: Empower the Team

The idea of empowerment is a critical part of the agile mindset. Predictive team environments can also benefit from empowered team members who can assist project managers in making decisions based on their expert judgment.

In all contexts, strive to create an environment where individual team members are empowered to contribute ideas.

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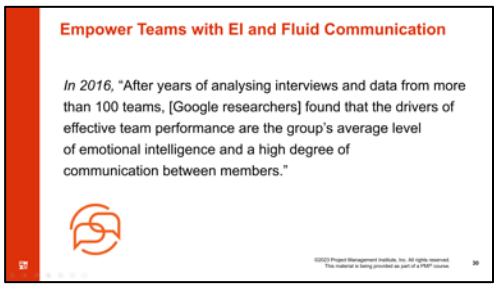

From "Great Teams Are About Personalities, Not Just Skills" by Dave Winsborough and Tomas Chamorro-Premuzic. Harvard Business Review, January 25, 2017. Accessed online 12/2022.

Empower Teams with EI and Fluid Communication

In 2016, "After years of analyzing interviews and data from more than 100 teams, [Google researchers] found that the drivers of effective team performance are the group's average level of emotional intelligence and a high degree of communication between members."

What are your thoughts about these findings, and how are they related to empowering a team?

_____

_____

_____

Empowerment, Unity, Autonomy

_____

_____

_____

Goal:

_____

_____

_____

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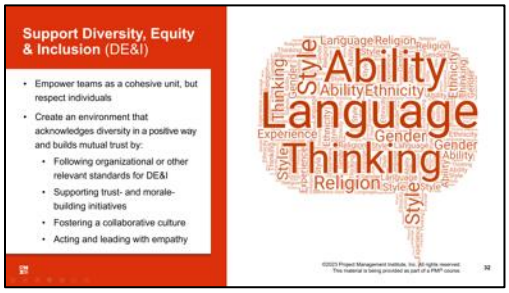


Support Diversity, Equality, and Inclusion (DE&I)

_____

_____

_____

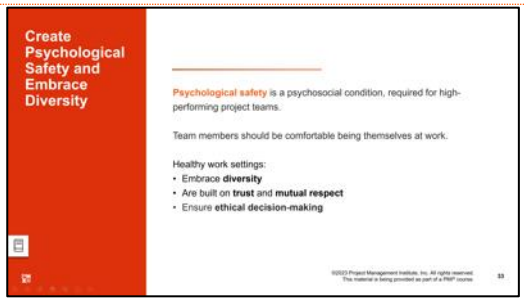
Team DE&I development objectives include:

_____

_____

_____

This topic follows from the DE&I Standards topic in Lesson 2. As with other leadership topics, we plan for and then support various aspects of a project or project team.



Create Psychological Safety and Embrace Diversity

Psychological safety

_____

_____

_____

Healthy work settings include:

_____

_____

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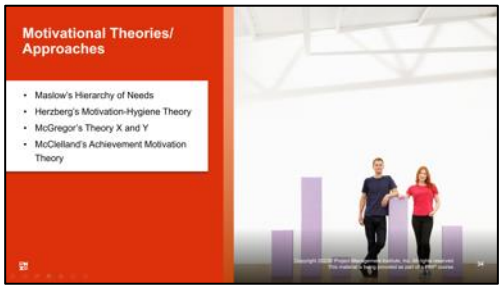
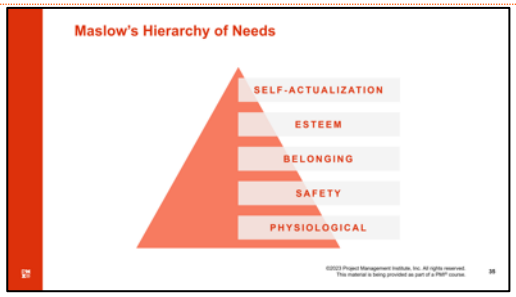


Motivational Theories/Approaches

How well do you know:

- Maslow's Hierarchy of Needs
- Herzberg's Motivation-Hygiene Theory
- McGregor's Theory X and Y
- McClelland's Achievement Motivation Theory



Maslow's Hierarchy of Needs

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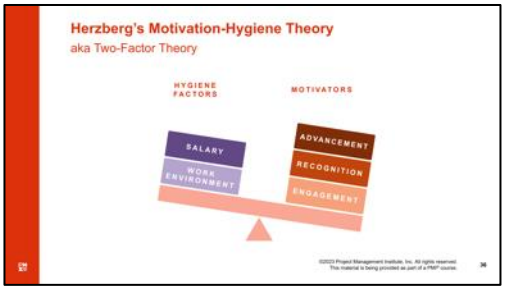

Herzberg's Motivation-Hygiene Theory (aka Two-Factor Theory)

McGregor's Theory X and Theory Y

Theory X

Theory Y

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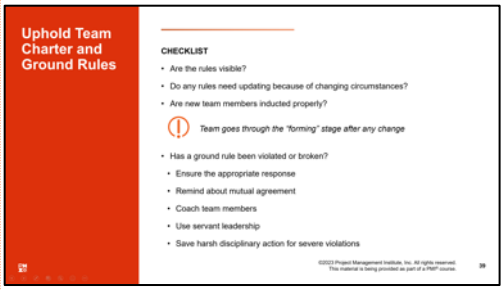
McClelland's Achievement Motivation Theory



Think of the ground rules as a means of creating empowerment and cohesion. The role of ground rules in managing conflict is explored in upcoming Topic 4G: Manage Conflict.

Uphold Team Charter and Ground Rules

Checklist:

- Visibility
- Updated rules because of changes
- New team member induction
- Ground rule violations

How do the team charter and the ground rules help to empower teams?

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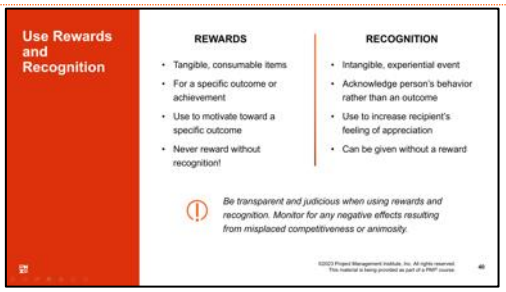

Use Rewards and Recognition

Rewards

Recognition

Decision-Making: Empower the Team to Act

Consensus

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Decision-Making: Opportunities to Empower the Team

Teams that actively participate in making decisions are empowered by the action.

Some opportunities to decide about:

- Activities

_____

_____

_____

- Risks

_____

_____

_____

- Anything else?

_____

_____

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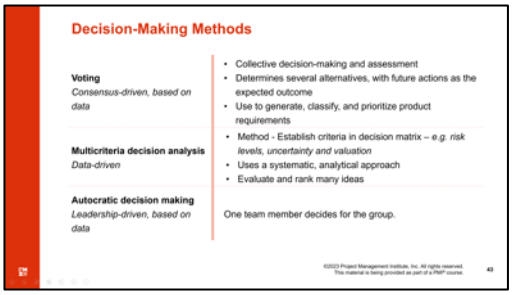

Decision-Making Methods

Voting	
Multicriteria decision analysis	
Autocratic decision making	

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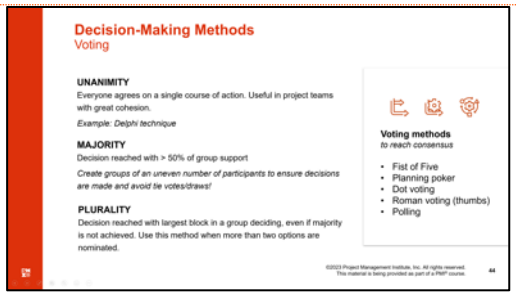

Decision-Making Methods: Voting

Voting methods:

_____

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Unanimity	
Majority	
Plurality	

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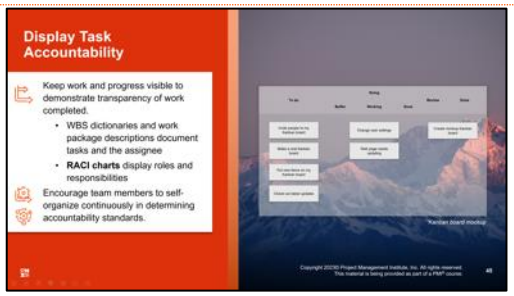
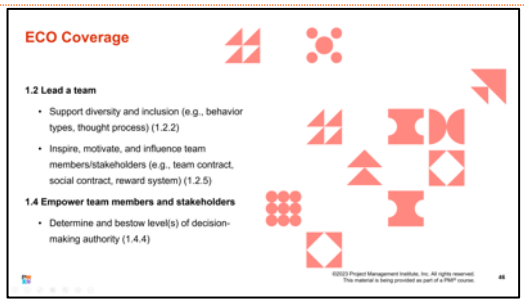


Display Task Accountability

Why do we need to do this?

Predictive

Hybrid/Adaptive



End of Topic 4C

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TOPIC 4D | SUPPORT TEAM MEMBER PERFORMANCE

ECO Coverage

1.3 Support team performance
- Appraise team member performance against key performance indicators (KPIs) (1.3.1)
- Support and recognize team member growth and development (1.3.2)
- Determine appropriate feedback approach (1.3.3)
- Verify performance improvements (1.3.4)

1.14 Promote team performance through the application of emotional intelligence
- Assess behavior through the use of personality indicators (1.14.1)
- Analyze personality indicators and adjust to the emotional needs of key project (1.14.2)

Please note that though this topic title is very similar to the title of Lesson 5, this section is about supporting ***individuals.***

Topic 4D: Support Team Member Performance

Supported team members perform better and are motivated to do their best work. You'll need strategies to maintain support for individuals on the whole team. These are mainly focused on emotional intelligence and communication.

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Manage and Lead

Management by Objectives

_____

_____

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Servant Leadership – Three steps:

_____

_____

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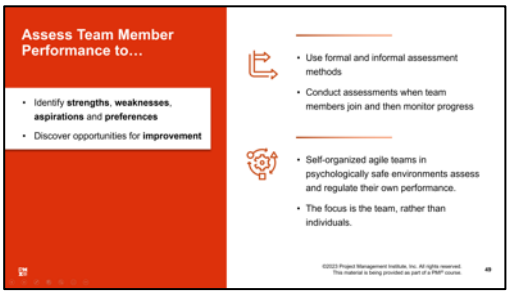

Assess Team Member Performance to…

Predictive

Adaptive

Performance Assessment Tasks

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Personality Indicators: Look Beyond Introvert/Extrovert

_____

_____

_____

Commonly used tools

_____

_____

_____

_____

DO:	DON'T:

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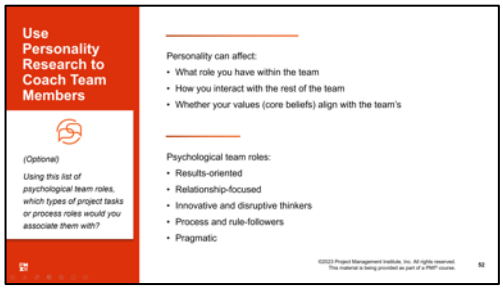

Use Personality Research to Coach Team Members

Personality can affect

_____

_____

Psychological team roles

_____

_____

Using the list of psychological team roles, which types of project tasks or process roles would you associate them with?

_____

_____

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Emotional Intelligence - 5 components

Emotional self-awareness

_____

_____

Self-regulation

_____

_____

Motivation

_____

_____

_____

Empathy (discussed in more depth in next slides)

_____

_____

Social Skills

_____

_____

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Goleman, D. (1995) Emotional Intelligence : Why It Can Matter More Than IQ

Emotional Intelligence: Overview

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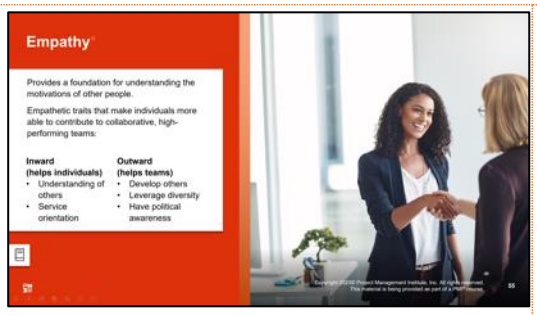

Empathy

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Inward

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Outward

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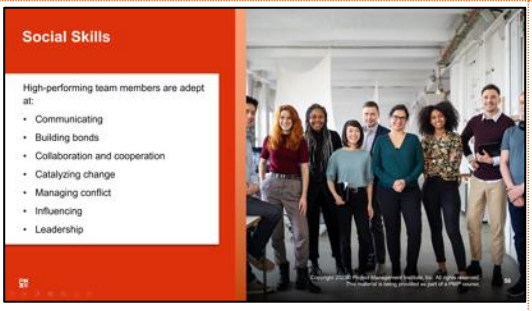

Social Skills

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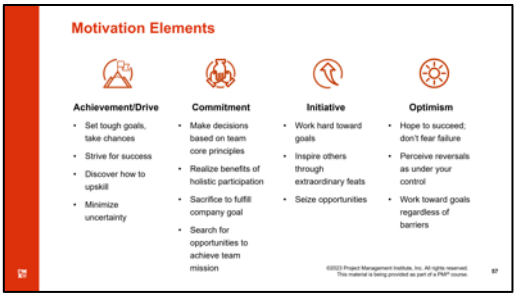

Motivation Elements

Achievement/drive

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Commitment

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Initiative

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Optimism

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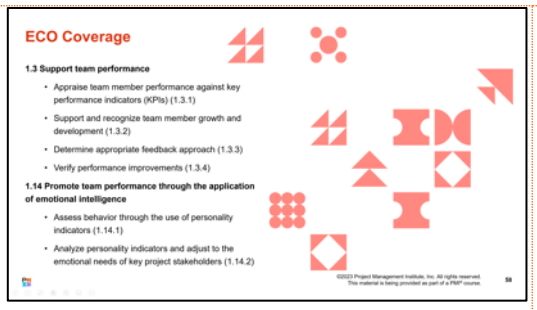

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TOPIC 4E | COMMUNICATE AND COLLABORATE WITH STAKEHOLDERS

ECO Coverage

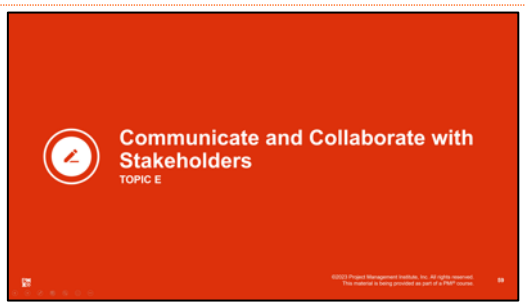
2.2 Manage communications
- Communicate project information and updates effectively (2.2.3)
- Confirm communication is understood and feedback is received (2.2.4)

1.2 Lead a team
- Analyze team members' and stakeholders' influence (1.2.6)

2.4 Engage stakeholders
- Engage stakeholders by category (2.4.3)

1.9 Collaborate with stakeholders
- Optimize alignment between stakeholder needs, expectations, and project objectives (1.9.2)
- Build trust and influence to accomplish project objectives (1.9.3)

3.2 Evaluate and deliver project benefits and value
- Apprise stakeholders of value gained by the project (3.2.5)



Topic 4E: Communicate and Collaborate with Stakeholders

Information, relationships, progress — everything depends on successful communication. We discussed how to plan for it in lesson 2, topic A: "Identify and Engage Stakeholders."

Now we move into execution and to explore effective communication and collaboration with stakeholders.

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Communications are both personal and strategic. As a project leader, you need to manage volumes of informal and formal conversations, emails documents and so on.

You also must establish healthy, collaborative working relationships within the team and with stakeholders.

Project managers spend a great deal of time communicating with stakeholders, so it is important to ensure the right information is getting to the right stakeholder so timely decisions can be made, issues addressed, and expectations met.

Collaboration with stakeholders looks different in each project, but let's look at some general guidelines.

\

"Communication is the real work of leadership"

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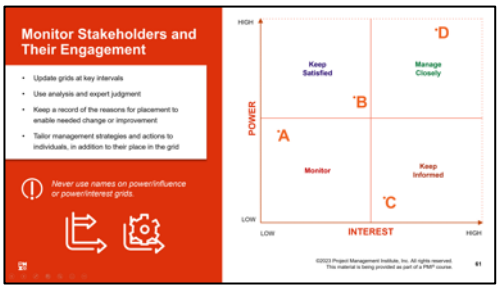

Monitor Stakeholders and Their Engagement

Review continuously and update the matrix.

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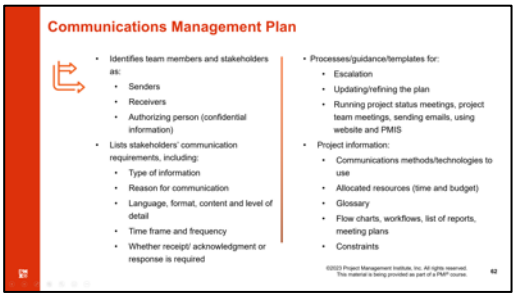

Communications Management Plan

Components:

- Team member and stakeholder identification
- Stakeholder communication requirements
- Processes/guidance/templates
- Project information

Team member and stakeholder ID

_____

_____

Stakeholder communication requirements

_____

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_____

Processes/guidance/templates

_____

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Project information:

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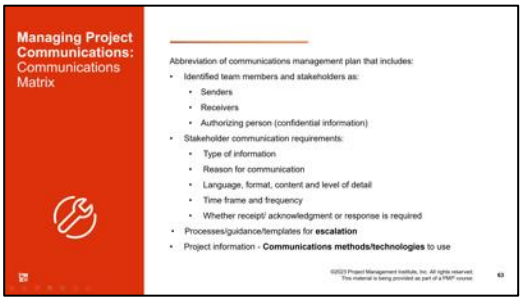

Managing Project Communications: Communications Matrix

This is a shorter form of a communications management plan.

Format can be a spreadsheet, whiteboard, other

Contents:

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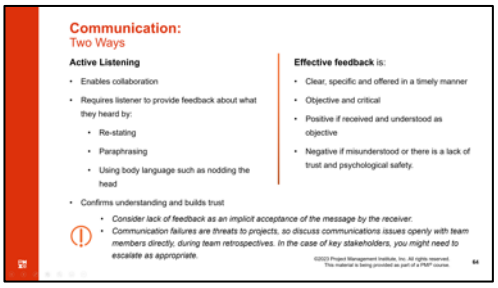

Communications: Two Ways

Active listening

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Effective feedback is:

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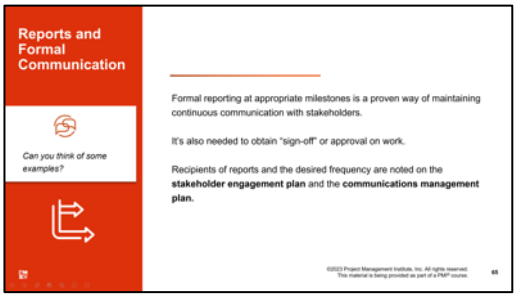

Reports and Formal Communication

Can you think of some examples?

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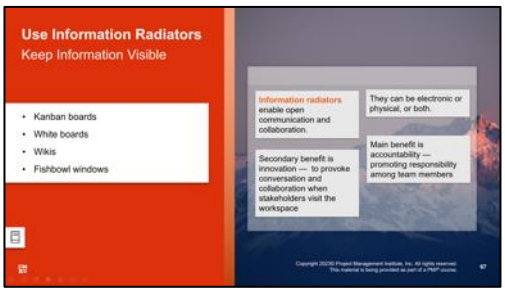
How to Collaborate

Guidelines for collaboration



Watch a video and gain further information on information radiators in Lesson 5!

Use Information Radiators: Keep Information Visible

Formats and benefits for collaboration.

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Collaboration Activities

Communicate and Collaborate to Negotiate

Meetings

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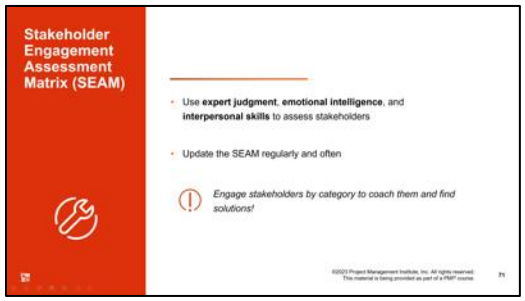

Stakeholder Engagement Assessment Matrix (SEAM)

Explain how to use this tool to help collaboration and communication with stakeholders:

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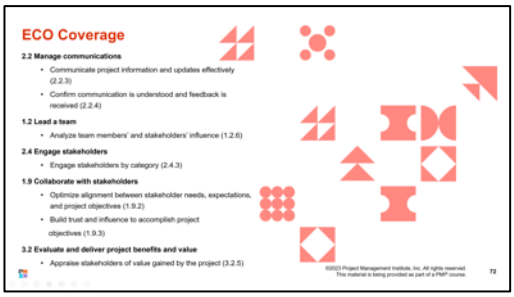

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TOPIC 4F | TRAINING, COACHING, AND MENTORING

ECO Coverage

1.6 Build a team

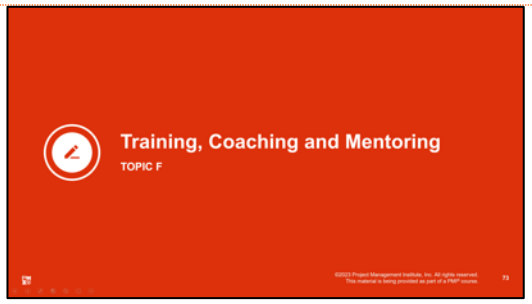
- Appraise stakeholder skills (1.6.1)

1.5 Ensure team members/stakeholders are adequately trained

- Determine required competencies and elements of training (1.5.1)
- Determine training options on training needs (1.5.2)
- Allocate resources for training (1.5.3)
- Measure training outcomes (1.5.4)

1.13 Mentor relevant stakeholders

- Allocate the time for coaching mentoring (stakeholders) (1.13.1)
- Recognize and act on coaching mentoring opportunities (1.13.2)



Topic 4F: Training, Coaching and Mentoring

Let's move from collaboration to training with team members and stakeholders. This is a different leadership topic, but still within the realm of "working together."

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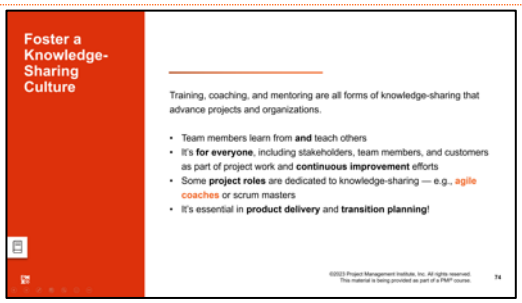

Foster a Knowledge-Sharing Culture

Agile coach / scrum master role

Training, Coaching and Mentoring: Descriptions

Descriptions and uses of each

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How to Acquire Required Competencies

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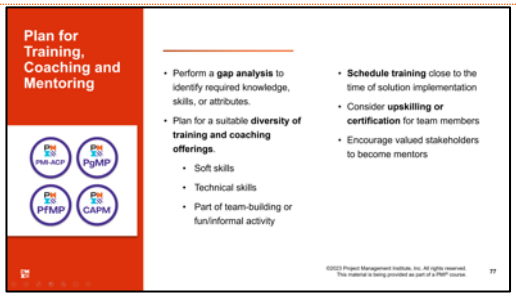

Plan for Training, Coaching and Mentoring

Describe a well-rounded plan for training, coaching and mentoring:

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Know the Value of Training, Coaching and Mentoring

Treat knowledge as an asset!

Training, Coaching and Mentoring Discussion

- Have you ever had a valuable trainer, coach, or mentor?
- Describe why they were effective.
- Would people think you are a valuable trainer, coach, or mentor? Why?

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Elements of Training

Tailor training options to the team:

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Coach Teams and Individuals in Project Management

Explain the value of sharing project management with others. Which types of knowledge should be shared?

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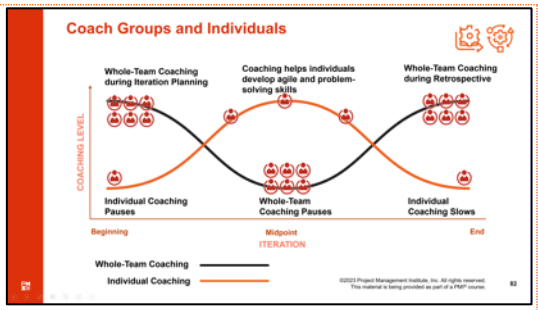

Coach Groups and Individuals

Explore this diagram about coaching strategies in adaptive and hybrid teams! Note the two levels of coaching: individual and team coaching.

Self-Organizing Teams Collaborate and Learn

Tacit knowledge

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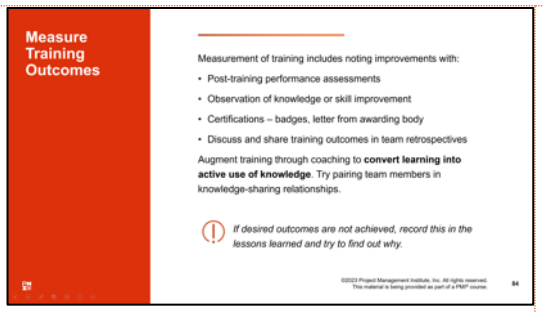
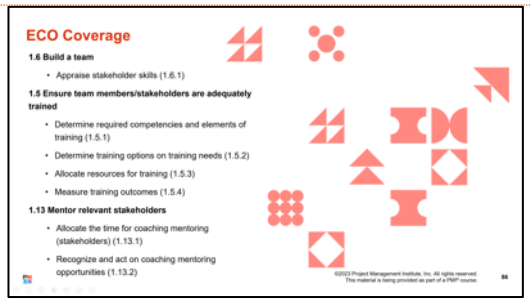


Measuring Training Outcomes

Maintain Mentorships

Optional further reading: "Mentoring: a key competency for program and project professionals" URL: https://www.PMI.org/learning/library/mentoring-key-competency-program-project-professionals-6264



End of Topic 4F

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TOPIC 4G | MANAGE CONFLICT

ECO Coverage

1.1 Manage conflict
- Interpret the source and stage of the conflict (1.1.1)
- Analyze the context for the conflict (1.1.2)
- Evaluate/recommend/reconcile the appropriate conflict resolution solution (1.1.3)

1.12 Define team ground rules
- Discuss and rectify ground rule violations (1.12.3)

1.10 Build shared understanding
- Investigate potential misunderstandings (1.10.4)
- Break down situations to identify the root cause of a misunderstanding (1.10.1)

Topic 4G: Manage Conflict

An extremely important part of project leadership is maintaining a peaceful, productive working environment in which conflict is managed. In this section, we learn how to deal with conflicts, so that when they arise or escalate, you can attend to them.

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Why Conflict Management Matters

Ineffective conflict management leads to:

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Effective conflict management leads to:

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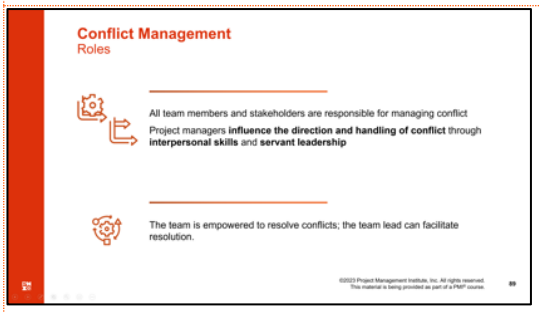

Conflict Management: Roles

Is conflict management different in predictive and adaptive teams? How so? Who does what?

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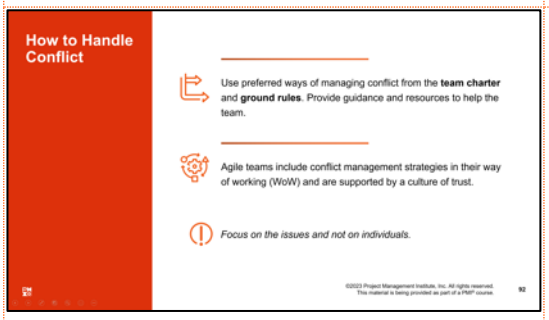
Causes of Conflict: Context

Describe the common causes of conflict and contexts

Conflict as Part of Team Culture

Optional further reading on psychological safety on PMI.org.



How to Handle Conflict

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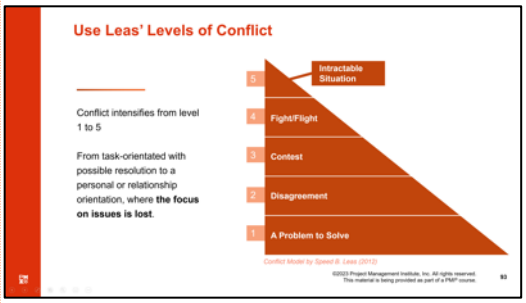

Use Leas' Levels of Conflict

Leas, Speed B. Leadership and Conflict. Nashville: Abingdon Press, 1983.

- **Level 1 - Problem to solve**: Differences are identified, then shared and discussed among members. This level is a problem or task-oriented conflict, not a person or relationship-oriented conflict.
- **Level 2 - Disagreement:** Personalities and issues mix; therefore, problems cannot be identified. At this stage, people begin to distrust one another and make problems personal.
- **Level 3 - Contest:** Win/lose dynamic emerges, followed by taking sides, distorted communication, personal attacks. Conflict objectives shift from focus on self-protection to winning the argument. People feel threatened or invigorated and ready to fight.
- **Level 4 - Fight/Flight:** Conflict participants may shift from winning to now trying to hurt or get rid of their opponents. Intervention is required.
- **Level 5 - Intractable situation/War:** People are now incapable of having a clear understanding of issues. Efforts to destroy others' reputation, positions, or well-being are common. This eventually ruins the relationship.

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Use Interpersonal Skills to Manage Conflict

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_____

Emotional Intelligence	
Influencing	
Leadership	
Decision-Making	
Active Listening	

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Conflict Management Approaches

_____

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Smooth/ Accommodate	
Withdraw/ Avoid	
Compromise/ Reconcile	
Force/ Direct	
Collaborate/ Problem Solve	

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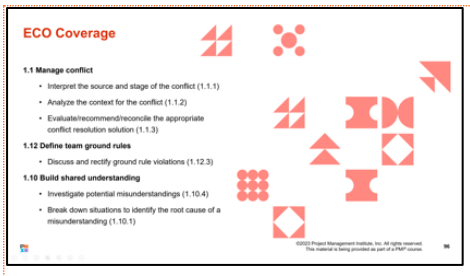

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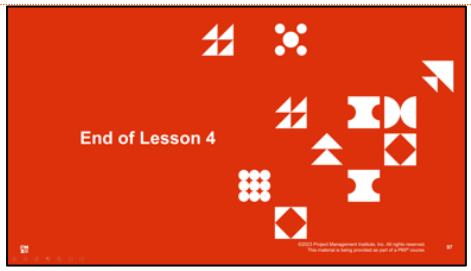

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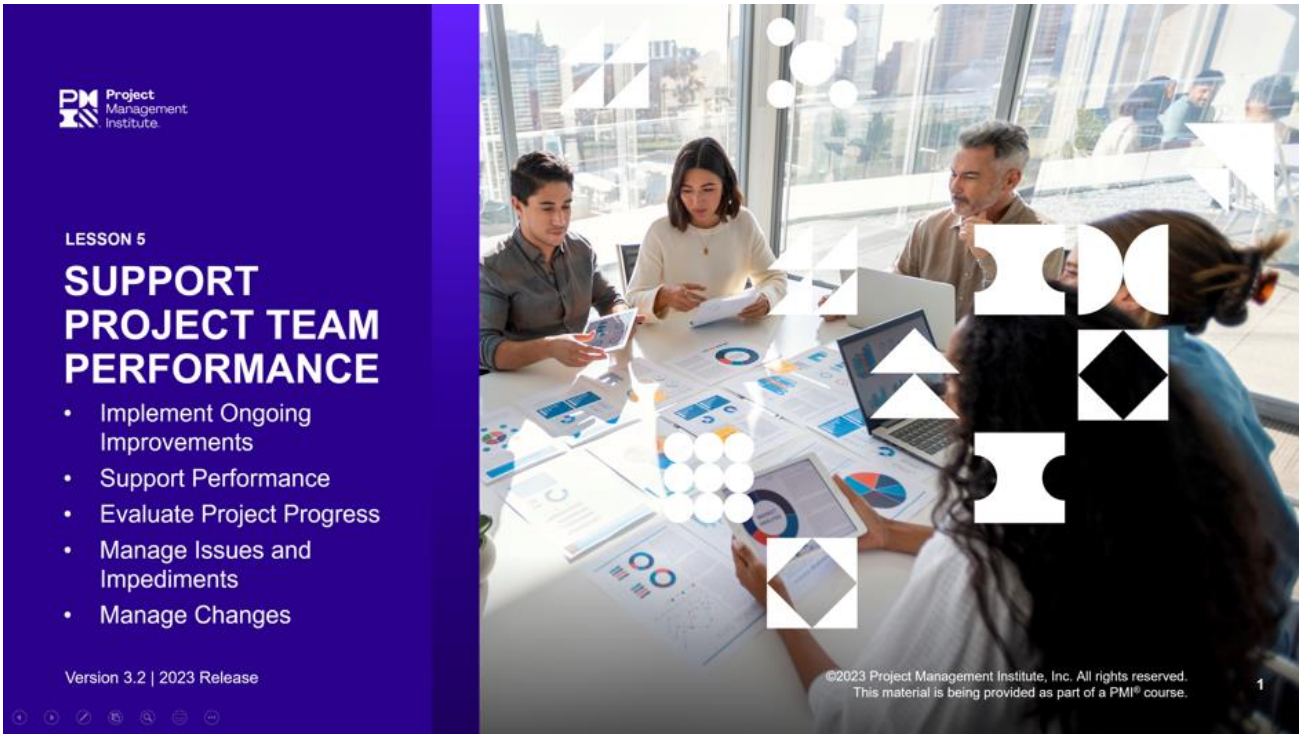

Lesson 5: Support Project Team Performance

Description

This lesson explores concepts and tasks related to ensuring the team is doing its best work and stays on track to achieving successful project outcomes.

We explore both the “People” and “Process” domains of the ECO in this lesson.

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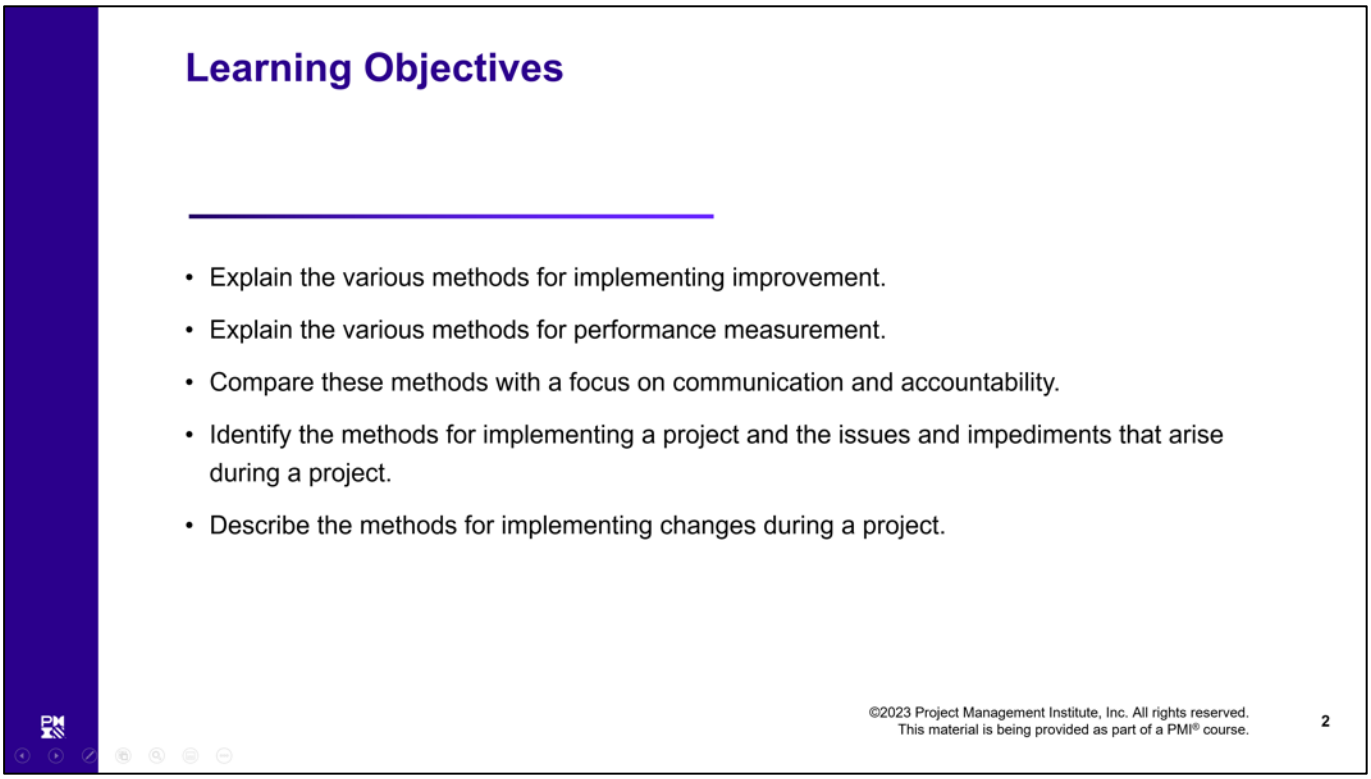

Topics

A. Implement ongoing improvements
B. Support performance
C. Evaluate project progress
D. Manage project issues and impediments
E. Manage project changes

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Lesson Notes

TOPIC 5A | IMPLEMENT ONGOING IMPROVEMENTS

Topics Covered

Continuous Improvement (CI)

- Plan continuous improvement methods, procedures, and tools
- Assess CI framework
- Plan CI methods, procedures, tools
- Recommend/Execute CI steps

Continuous improvement is a foundation of agile practices and best/good practices in organizations. Even though CI does not appear on the ECO, it is an essential part of the project manager role.

Topic 5A: Implement Ongoing Improvements

This lesson addresses the importance of continuous improvement (CI) methods to project practitioners and organizations.

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Continuous Improvement (CI)

Definition and description

_____

_____

What is 'kaizen'?

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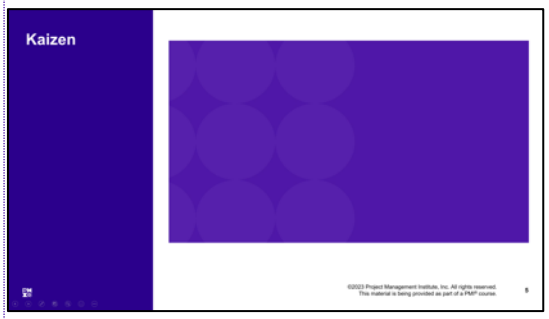

Kaizen Video

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Video

A look at the approaches that are widely credited as the beginning of the CI knowledge area.

Duration: 1m 37s

You can find this video—and all the others—in the LO CHOICE screen.

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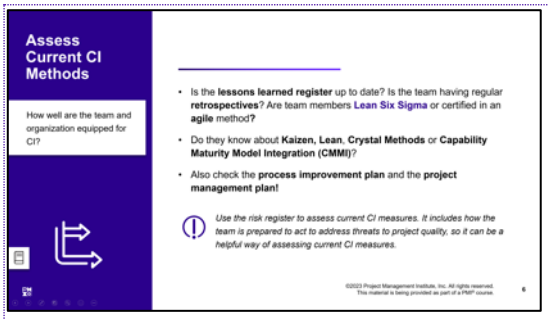

Assess Current CI Methods

Lean Six Sigma

Others?

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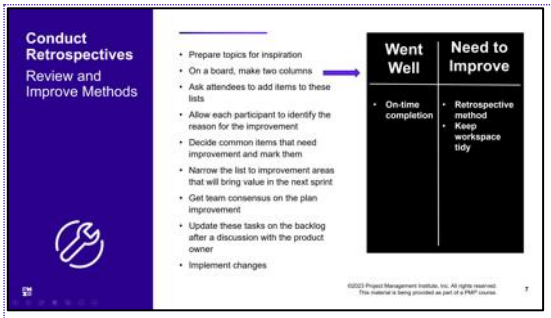

Conduct Retrospectives: Review and Improve Methods

How to conduct a retrospective:

- Prepare topics for inspiration
- On a board, make two columns: “What Went Well” and “What Could Be Improved”
- Ask attendees to add items to these lists
- Allow each participant to identify the reason for the improvement
- Decide common items that need improvement and mark them
- Narrow the list to those improvement areas that will bring value in the next sprint
- Get team consensus on the plan improvement
- Update these tasks on the backlog after a discussion with the product owner
- Implement changes

What could you be doing better?

_____

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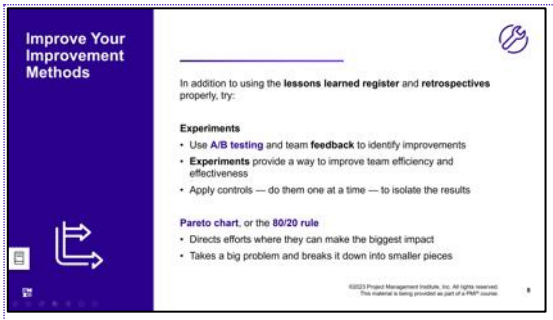
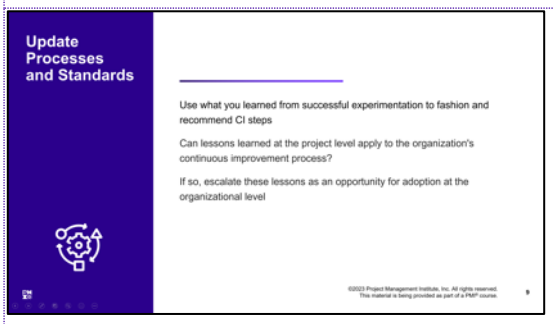


Improve Your Improvement Methods

A/B testing

Pareto chart

80/20 rule



Update Processes and Standards

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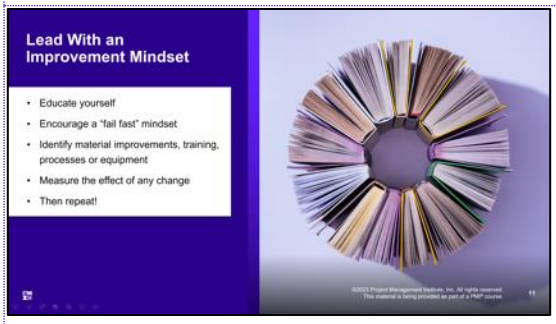
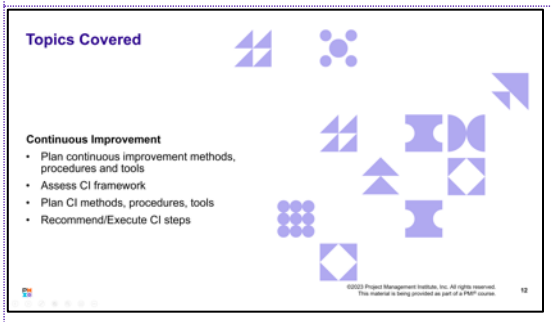
Continuous Improvement Discussion

What are improvement procedures in your organization?
What methods do you use?



Lead with an Improvement Mindset



End of Topic 5A

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TOPIC 5B | SUPPORT PERFORMANCE

ECO Coverage

2.2 Manage communications
- Communicate project information and updates effectively (2.2.3)
- Confirm communication is understood and feedback is received (2.2.4)

1.4 Empower team members and stakeholders
- Support team task accountability (1.4.2)
- Evaluate demonstration of task accountability (1.4.3)

1.6 Build a team
- Continuously assess and refresh team skills to meet project needs (1.6.3)
- Maintain team and knowledge transfer (1.6.4)

2.11 Manage project artifacts
- Continually assess the effectiveness of the management of the project artifacts (2.12.3)

2.13 Determine appropriate project methodology/methods and practices
- Use iterative, incremental practices throughout the project life cycle (e.g., lessons learned, key stakeholder engagement, risk) (2.13.4)

Topic 5B: Support Performance

Supported teams perform better and are motivated to do their best work.

This lesson explores good practices for ensuring team cohesion during execution of project work.

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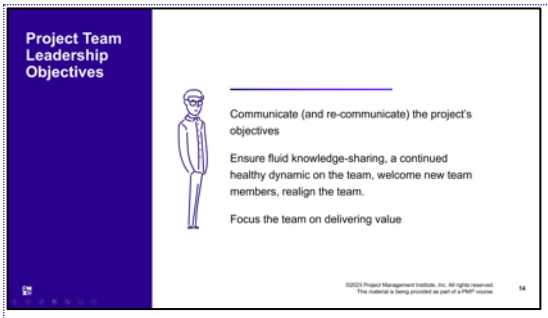
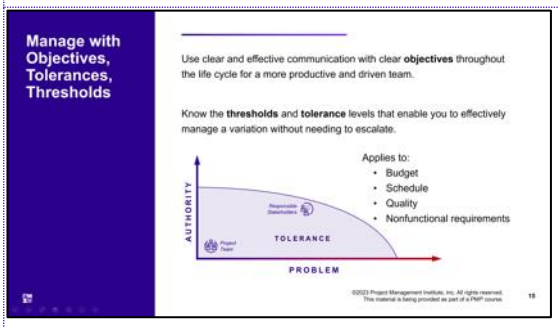


Project Team Leadership Objectives



Manage with Objectives, Tolerances, Thresholds

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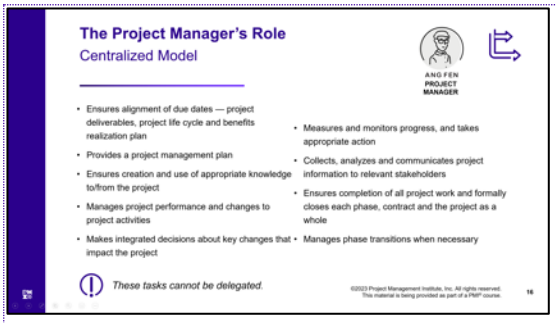

The Project Manager's Role: Centralized Model

Predictive

- Ensures alignment of due dates — project deliverables, project life cycle and benefits realization plan
- Provides a project management plan
- Ensures creation and use of appropriate knowledge to/from the project
- Manages project performance and changes to project activities
- Makes integrated decisions about key changes that impact the project
- Measures and monitors progress, and takes appropriate action
- Collects, analyzes, and communicates project information to relevant stakeholders
- Ensures completion of all project work and formally closes each phase, contract, and the project as a whole
- Manages phase transitions when necessary

_____

_____

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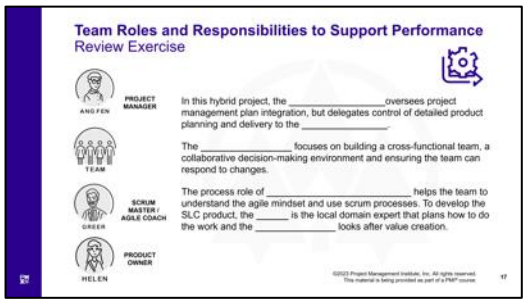

Fill in the blanks using the role labels at left.

ANG FEN	*PROJECT MANAGER*
TEAM	*TEAM*
GREER	*SCRUM MASTER/ AGILE COACH*
HELEN	*PRODUCT OWNER*

Teams Roles and Responsibilities to Support Performance: Review Exercise

In this hybrid project, the _____ oversees project management plan integration, but delegates control of detailed product planning and delivery to the _____.

The _____ focuses on building a cross-functional team, a collaborative decision-making environment and ensuring the team can respond to changes.

The process role of _____ helps the team to understand the agile mindset and use scrum processes.

To develop the SLC product, the _____ is the local domain expert that plans how to do the work and the _____ looks after value creation.

Answers are on the next page.

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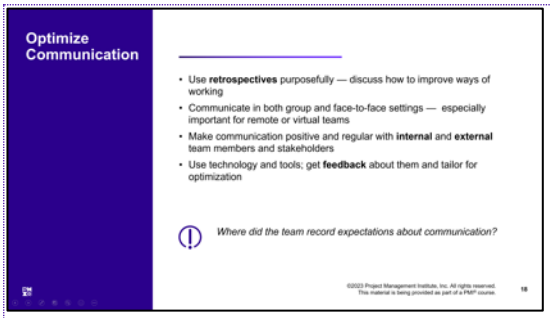

Optimize Communication

_____

_____

_____

_____

_____

Answers to quiz

In this hybrid project, the project manager oversees project management plan integration, but delegates control of detailed product planning and delivery to the team.

The project manager/agile coach / scrum master focuses on building a cross-functional team, a collaborative decision-making environment and ensuring the team can respond to changes.

The process role of agile coach / scrum master helps the team to understand the agile mindset and use scrum processes.

To develop the SLC product, the team is the local domain expert that plans how to do the work and the product owner looks after value creation.

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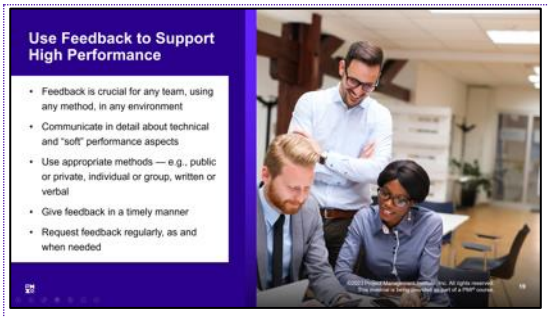
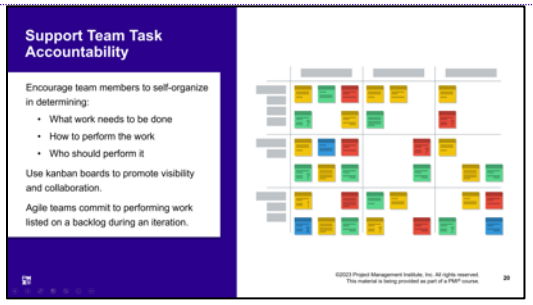


Use Feedback to Support High Performance



Support Team Task Accountability

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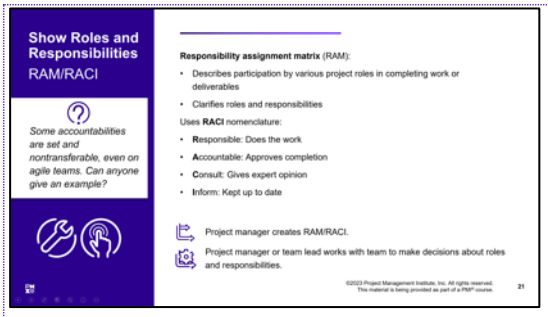

Show Roles and Responsibilities: RAM/RACI

Leadership and management roles

_____

_____

_____

Responsibility assignment matrix

_____

_____

_____

Some accountabilities are set and not transferable, even on agile teams. Can you give an example?

_____

_____

_____

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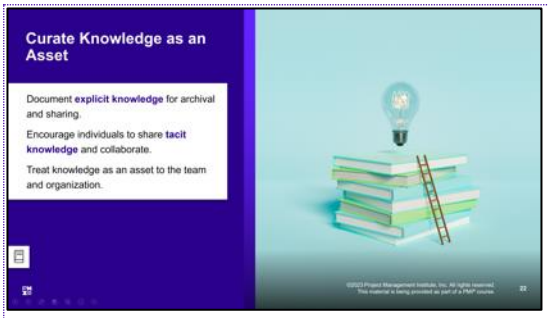

Curate Knowledge as an Asset

Explicit knowledge

_____

_____

_____

Tacit knowledge

_____

_____

_____

Additional notes:

_____

_____

_____

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Incorporate Knowledge Transfer

Community of practice (COP)

_____

_____

_____

_____

Work shadowing

_____

_____

_____

_____

Additional notes:

_____

_____

_____

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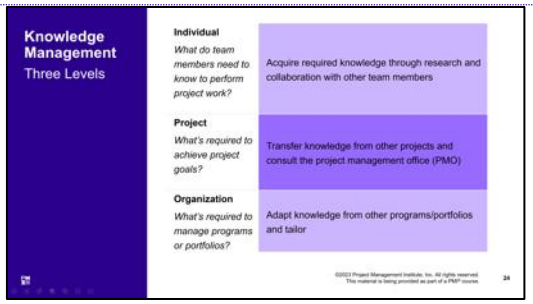
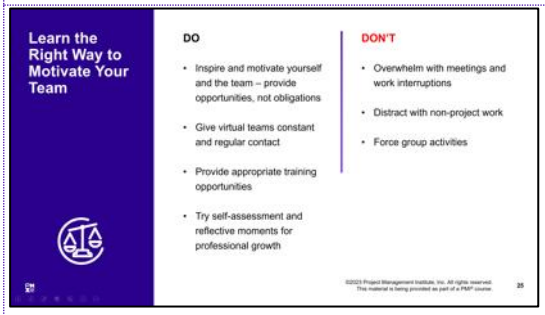


Knowledge Management: Three Levels

Individual What do team members need to know to perform project work?	
Project What's required to achieve project goals?	
Organization What's required to manage programs or portfolios?	



Learn the Right Way to Motivate Your Team

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DO:	DON'T:

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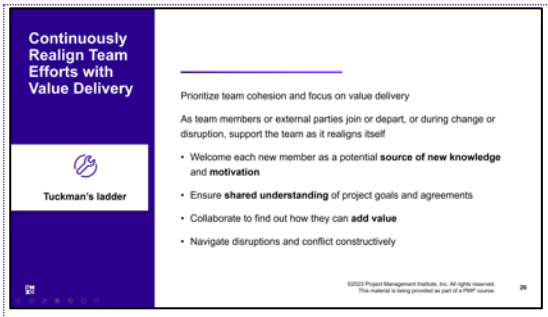
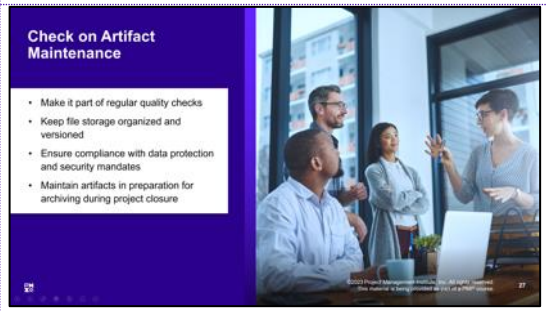
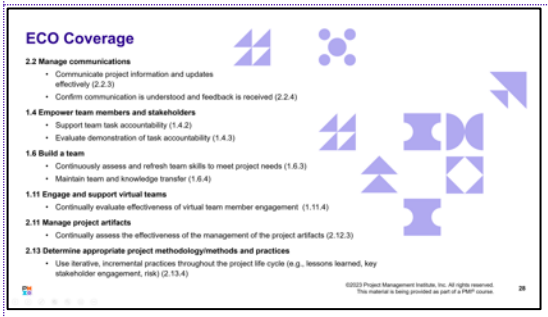


Continuously Realign Team Efforts with Value Delivery



Check on Artifact Maintenance



End of Topic 5B

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TOPIC 5C | EVALUATE PROJECT PROGRESS

ECO Coverage

2.8 Plan and manage scope
- Monitor and validate scope (2.8.3)

2.6 Plan and manage schedule
- Measure ongoing progress based on methodology (2.6.4)
- Modify schedule, as needed, based on methodology (2.6.5)
- Coordinate with other projects and other operations (2.6.6)

2.5 Plan and manage budget and resources
- Monitor budget variations and work with governance process to adjust as necessary (2.5.3)

2.1 Execute project with the urgency required to deliver business value
- Examine the business value throughout the project (2.1.2)

2.7 Plan and manage quality of products/deliverables
- Continually survey project deliverable quality (2.7.3)
- Recommend options for improvement based on quality gaps (2.7.2)

Topic 5C: Evaluate Project Progress

In this topic, we'll learn how to measure project progress and set it up for success.

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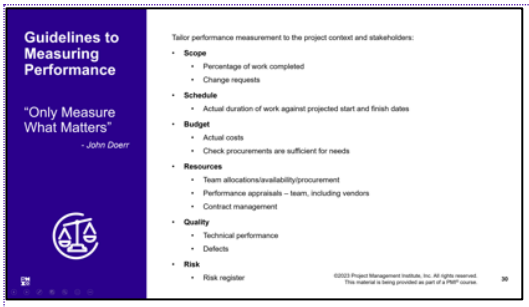

Guidelines to Measuring Performance

Scope

_____

_____

Schedule

_____

_____

Budget

_____

_____

Resources

_____

_____

Quality

_____

_____

Risk

_____

_____

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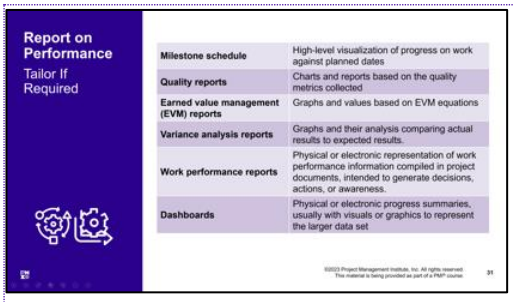
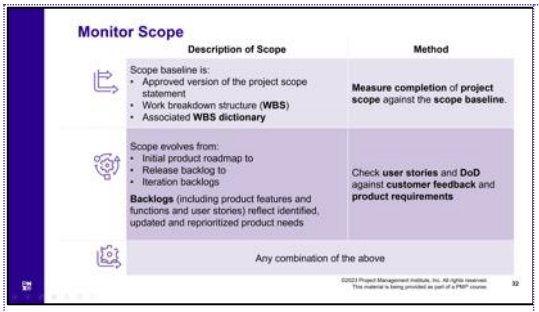


Report on Performance: Tailor if Required

_____

_____

Milestone schedule	
Quality reports	
Earned value management (EVM) reports	
Variance analysis reports	
Work performance dashboards	



Monitor Scope

_____

_____

_____

_____

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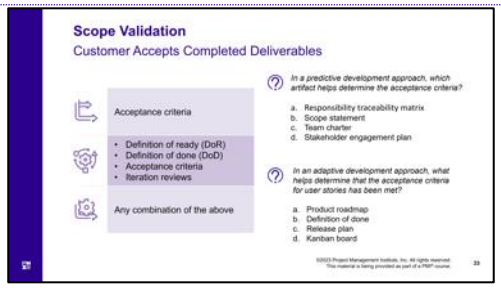

Scope Validation: Customer Accepts Completed Deliverables

_____

_____

	How does the customer accept the deliverables in each type of life cycle?

Now let's check that you learned!

Answers are on the next page.

1. In a predictive development approach, which artifact helps determine the acceptance criteria?
    a. Responsibility traceability matrix
    b. Scope statement
    c. Team charter
    d. Stakeholder engagement plan

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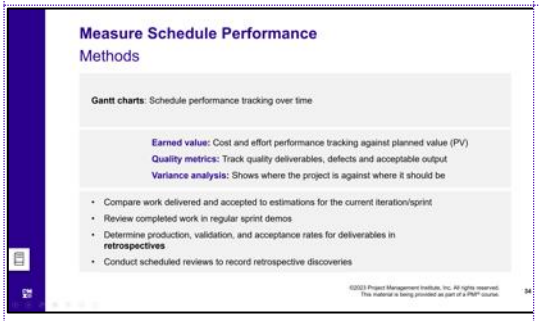
2. In an adaptive development approach, what helps determine that the acceptance criteria for user stories have been met?
    a. Product roadmap
    b. Definition of done
    c. Release plan
    d. Kanban board



Measure Schedule Performance

_____

_____

_____

Earned value (EV)

_____

_____

_____

_____

_____

Quality metric

_____

_____

_____

Variance analysis

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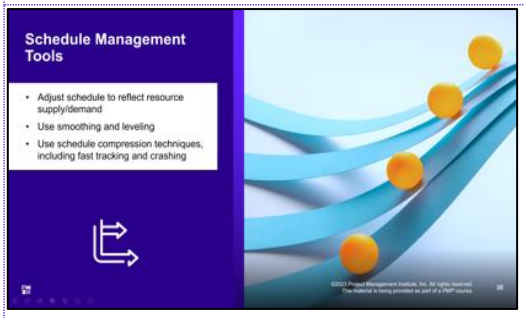
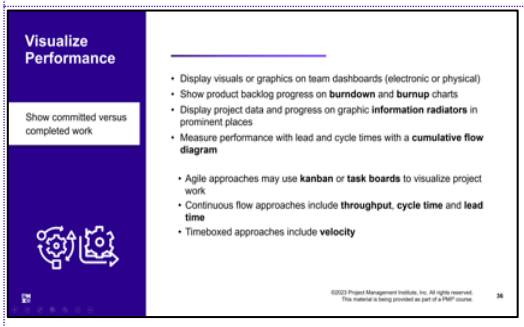
	_____ _____
Answers to scope validation quiz	B. Scope statement B. Definition of done
	Schedule Management Tools List and describe some schedule management tools used in predictive approaches: _____ _____ _____ _____ _____ _____
	Visualize Performance Explain how we show committed versus completed work: _____ _____ _____ _____

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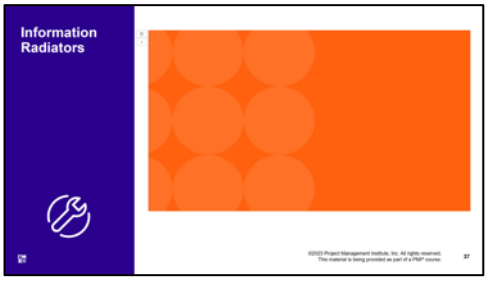

Video

Duration 2m 34s

We already learned about how to use information radiators to create transparency and collaborative spaces and environments. This video show how to use information radiators to monitor, communicate, and be able to act on project progress and work.

Information Radiators Video

A look at the information radiators and the value they provide.

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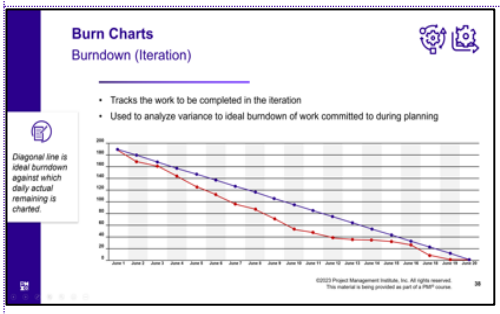
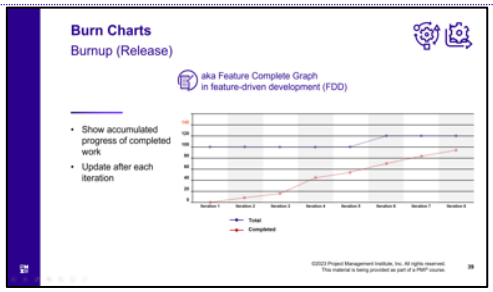
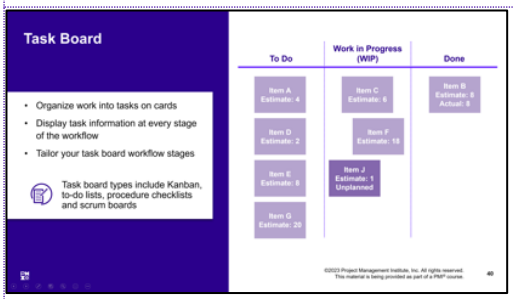


Burns Charts: Burndown (Iteration)



Burns Charts: Burnup (Release)



Task Board

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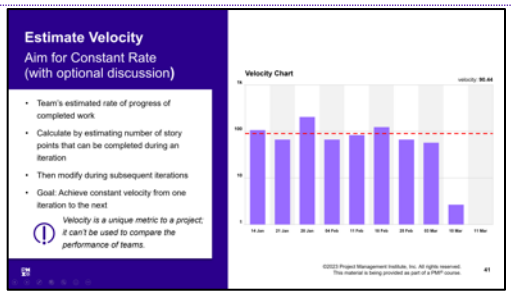
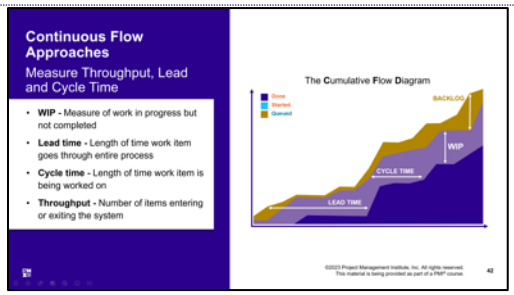


Estimate Velocity: Aim for Constant Rate



Continuous Flow Approaches: Measure Throughput, Lead and Cycle Time

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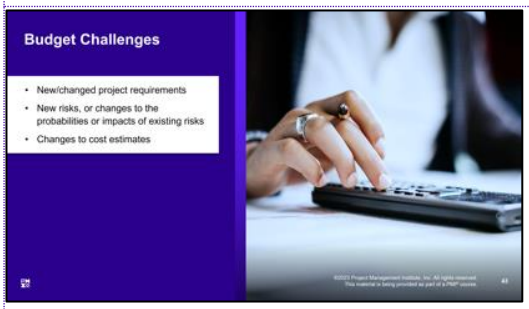

Budget Challenges

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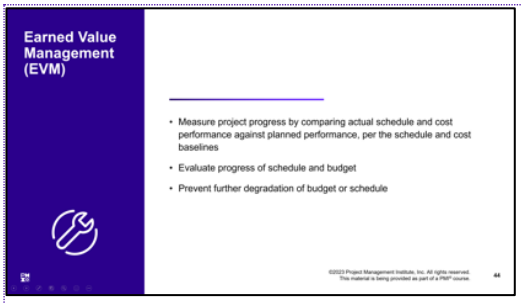

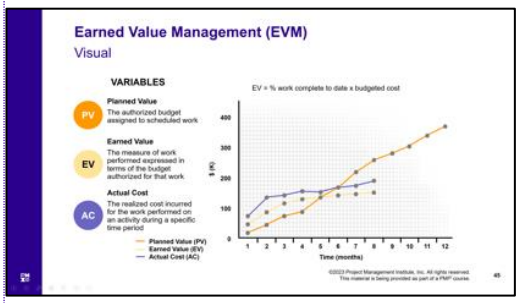

Earned Value Management (EVM) – two slides

Define and describe EVM

Planned value

Earned value

Actual cost

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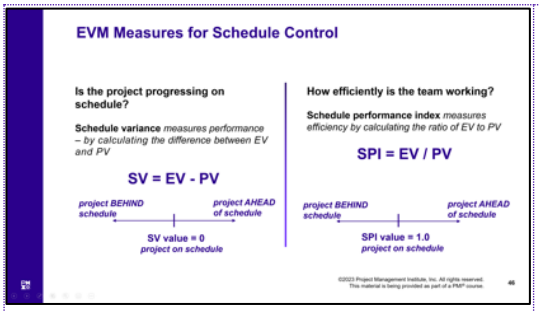

EVM Measures for Schedule Control

Make note of definitions and formulas!

Schedule variance - Is the project progressing on schedule?

_____

_____

_____

Schedule performance index - How efficiently is the team working?

_____

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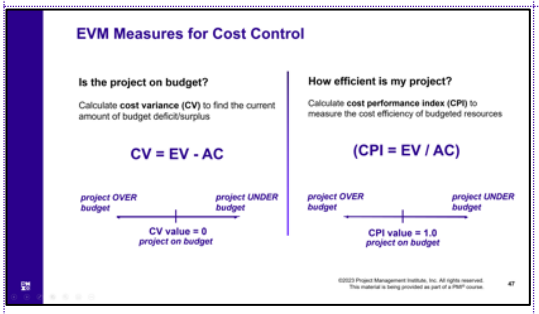

EVM Measures for Cost Control

Make note of definitions and formulas!

Cost variance - Is the project on budget?

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Cost performance index - How efficient is my project?

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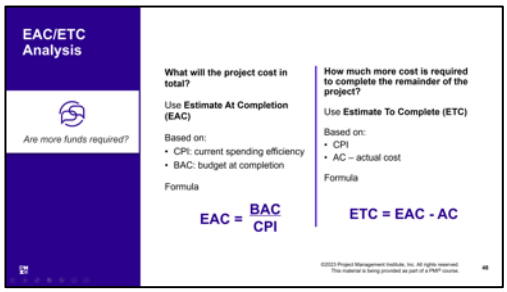

EAC/ETC Analysis

EAC – Estimate at completion
ETC – Estimate to complete

- Are more funds required
- What will the project cost in total?
- How much more is required to complete the planned work?

Make note of definitions and formulas!

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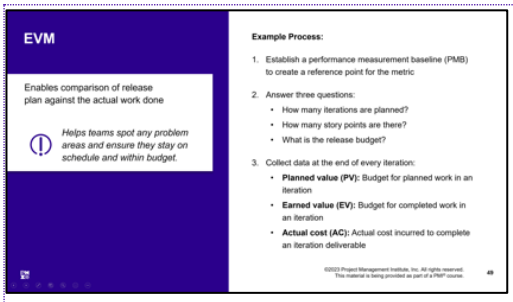
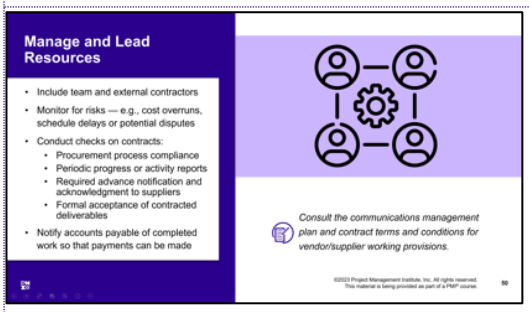
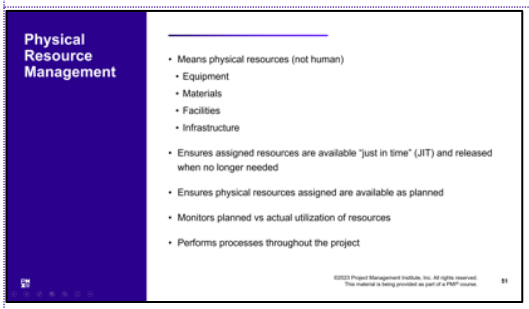


EVM

Here we consider how EVM can be used and the benefits in different kinds of projects.



Manage and Lead Resources



Physical Resource Management

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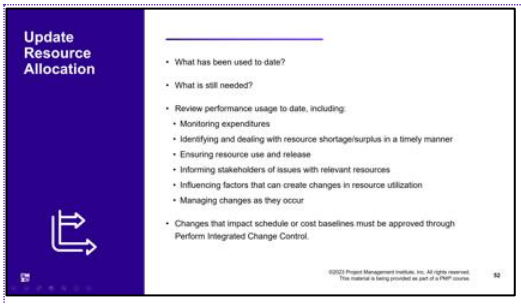
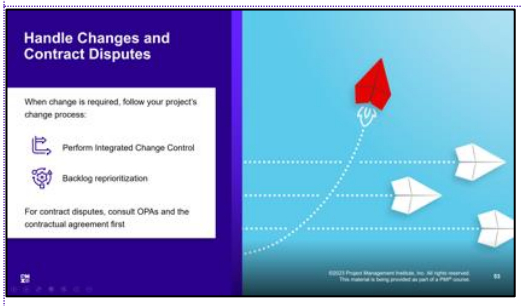


Update Resource Allocation



Handle Contract Changes and Disputes

Quality Management Guidelines

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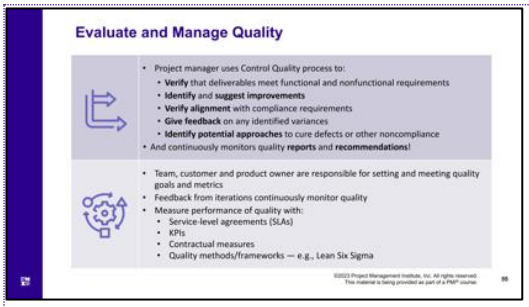

Evaluate and Manage Quality

Predictive	
Adaptive	

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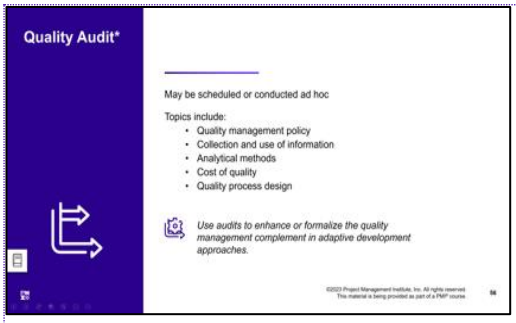

Quality Audit

Define and describe

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Additional notes:

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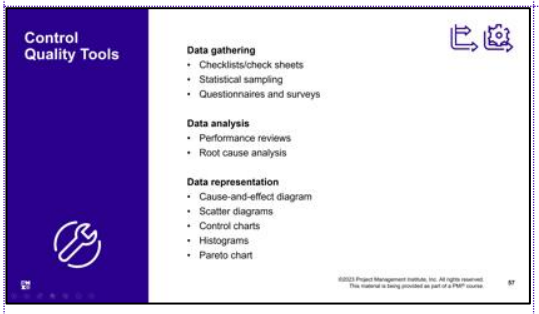

Control Quality Tools

List the tools used to control quality in the following tasks:

Data gathering

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Data analysis

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Data representation

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Control Quality Tools: Example

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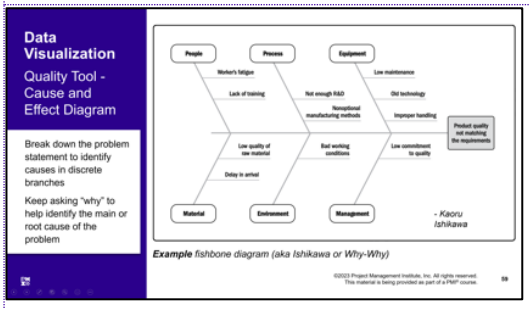

Data Visualization: Quality Tool—Cause and Effect Diagram

What is this diagram also called?

_____

Explain how to use this diagram.

_____

_____

_____

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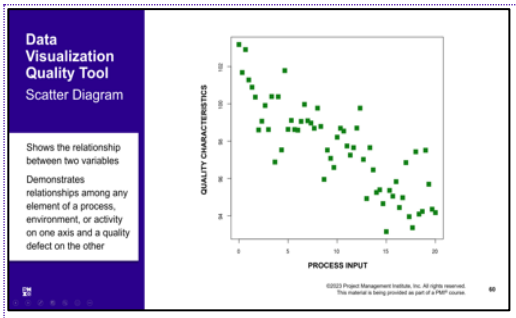
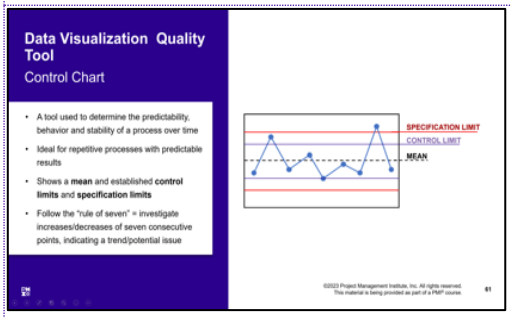


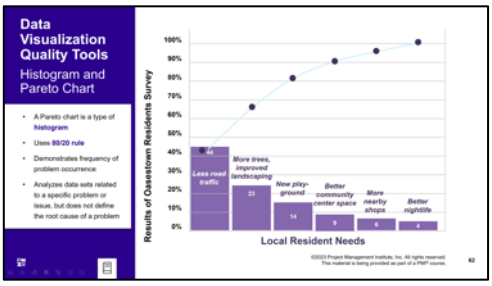
Data Visualization: Quality Tool — Scatter Diagram

Explain how to use this tool.



Data Visualization: Quality Tool — Control Chart

Explain how this tool works



Data Visualization: Quality Tool — Histogram and Pareto Chart

Explain how this tool works

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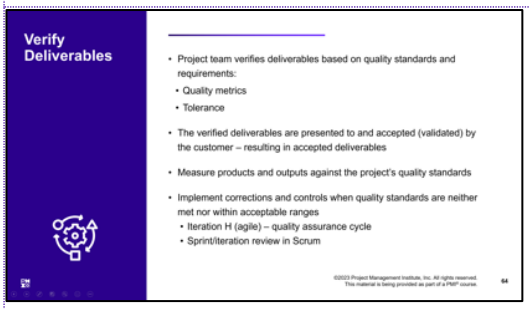
Ensure Quality of Processes and Product

During project execution, we create, update, and validate the quality of project processes and products.



Verify Deliverables

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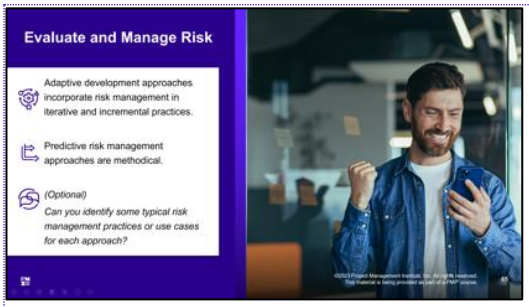

Evaluate and Manage Risk

How do you know that risk management is adequate/working for a project?

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_____

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Can you identify some typical risk management practices that keep projects progressing fluidly?

_____

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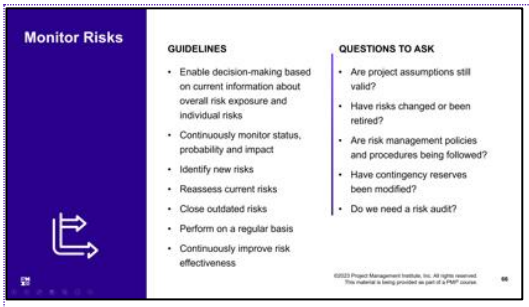

Monitor Risks

Guidelines

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Questions to ask

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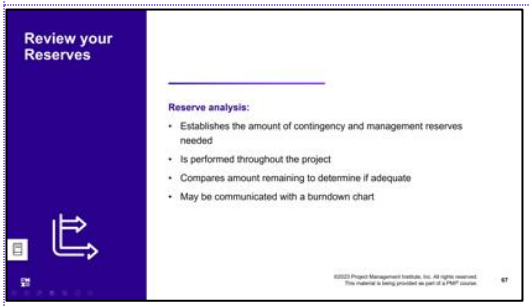

Review Your Reserves

Reserve analysis

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Additional notes:

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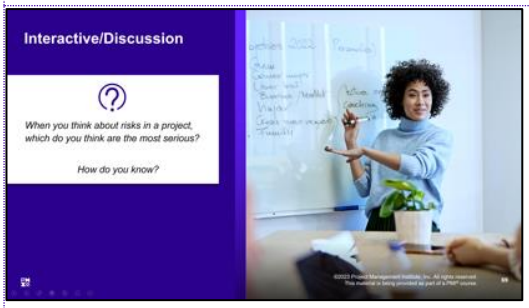
Risk Register

Guidelines



Risk Management Discussion

When you think about risks in a project, which do you think are the most serious? How do you know?

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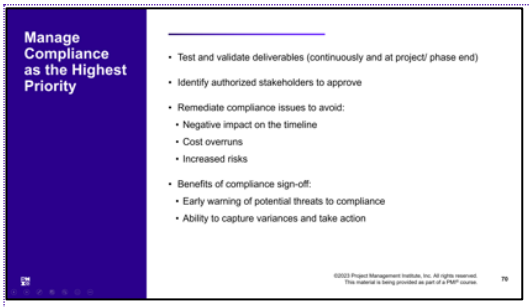
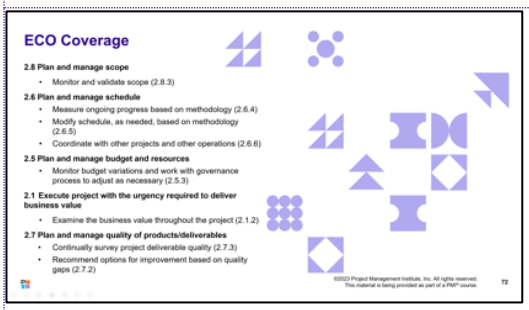


Manage Compliance as the Highest Priority

Guidelines for managing compliance

Examine Business Value

How often and how well does your project team really focus efforts on examining the business value of the project during execution? How could you improve this?



End of Topic 5C

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TOPIC 5D | MANAGE PROJECT ISSUES AND IMPEDIMENTS

ECO Coverage

2.15 Manage project issues
- Recognize when a risk becomes an issue (2.15.1)
- Attack the issue with the optimal actions to achieve project success (2.15.2)
- Collaborate with relevant stakeholders on the approach to resolve the issues (2.15.3)

1.7 Address and remove impediments, obstacles, and blockers for the team
- Determine critical impediments, obstacles, and blockers for the team (1.7.1)
- Prioritize critical impediments, obstacles, and blockers for the team (1.7.2)
- Use network to implement solutions to remove impediments, obstacles, and blockers for the team (1.7.3)
- Re-assess continually to ensure impediments, obstacles and blockers for the team are being addressed (1.7.4)

Topic 5D: Manage Project Issues and Impediments

Change is inevitable, but it is rarely insurmountable. Let's look at strategies, tools, and techniques for managing project changes!

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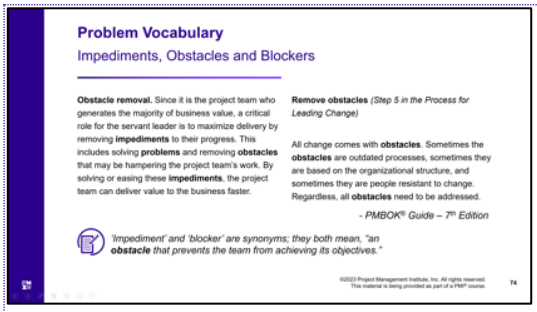

Problem Vocabulary: Impediments, Obstacles and Blockers

Describe the role of the servant leader (project manager) in removing obstacles for the team:

_____

_____

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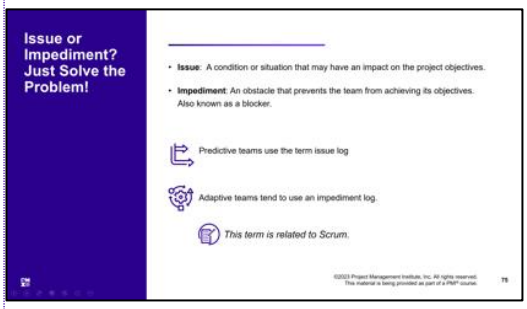

Issue or Impediment? Just Solve the Problem

_____

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Guidelines for use:

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The difference between the terms 'issue log' and 'impediment log' is primarily due to use of the Scrum framework. However, adaptive teams tend to use the term 'impediment log' while predictive teams use 'issue log'.

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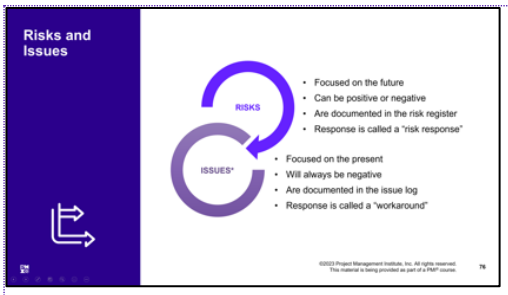

Risks and Issues

Ensure you understand the relationship between risks and issues.

- A risk is generally defined as an event that might impact a project.
- An issue is a risk that has happened and will impact the project.
- An issue can also just happen, without a known risk being present – these kinds of issues arise from unknown factors

Risks

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_____

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Issues

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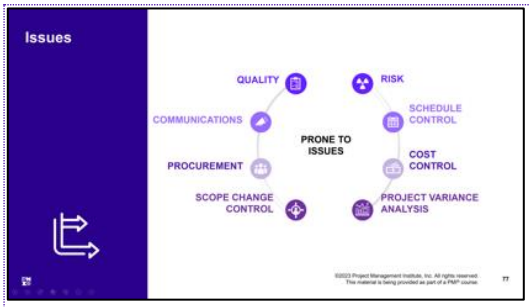

Issues

These are the areas in a project that are prone to issues:

- Scope change control
- Schedule control
- Cost control
- Project variance analysis
- Quality
- Risk
- Procurement
- Communications

Can you think of some examples?

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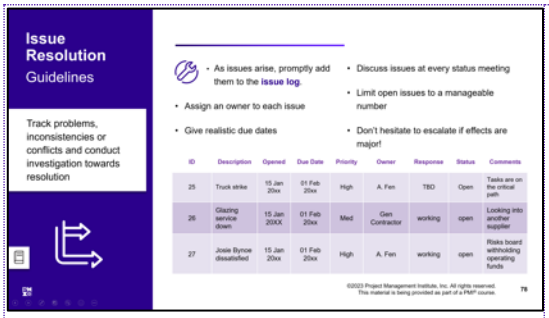

Issue Resolution: Guidelines

ID	Description	Opened	Due Date	Priority	Owner	Response	Status	Comments
25	Truck strike	15 Jan 20xx	01 Feb 20xx	High	A. Fen	TBD	Open	Tasks are on the critical path
26	Glazing service down	15 Jan 20XX	01 Feb 20xx	Med	Gen Contractor	working	open	Looking into another supplier
27	Josie Bynoe dissatisfied	15 Jan 20xx	01 Feb 20xx	High	A. Fen	working	open	Risks board withholding operating funds

This example issue log uses activities from the Shawpe project case study.

Discover and Solve Impediments Using Scrum

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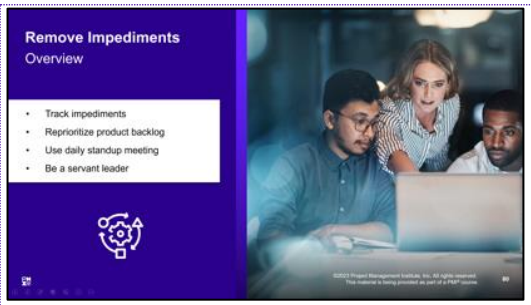
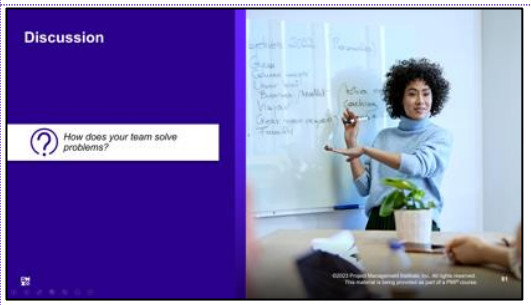
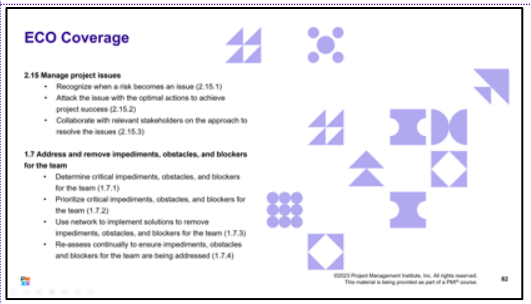


Remove Impediments: Overview



Discussion

How does your team solve problems?



End of Topic 5D

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TOPIC 5E | MANAGE PROJECT CHANGES

ECO Coverage

3.3 Evaluate and address external business environment changes for impact on scope

- Survey changes to external business environment (e.g., regulations, technology, geopolitical, market) (3.3.1)
- Assess and prioritize impact on project scope/backlog based on changes in external business environment (3.3.2)
- Recommend options for scope/backlog options (e.g., schedule, cost changes) (3.3.3)
- Continually review external business environment for impacts on project scope/backlog (3.3.4)

2.10 Manage project changes

- Anticipate and embrace the need for change (e.g., follow change management practices (2.10.1)
- Execute change management strategy according to the methodology (2.10.3)
- Determine a change response to move the project forward (2.10.4)

Topic 5E: Manage Project Changes

Change is inevitable, but it is rarely insurmountable. Let's look at strategies, tools, and techniques for managing project changes!

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Interactive/Discussion

Which constitutes a change in a project?

Can a change come from anywhere?

How does the life cycle and development approach affect our response to change?

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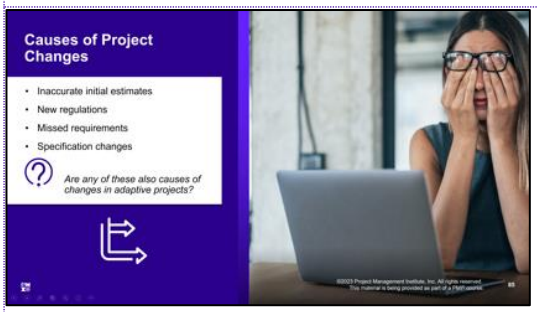

Causes of Project Changes

Typical causes for changes in predictive projects:

- Inaccurate initial estimates
- New regulations
- Missed requirements
- Specification changes

Are any of these also causes of changes in adaptive projects?

_____

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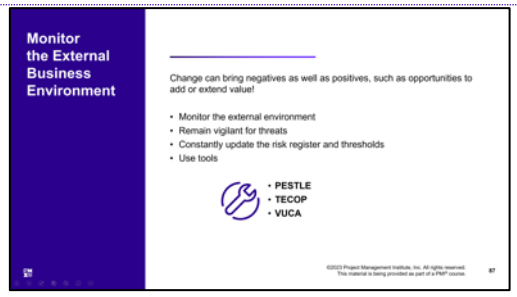
Explore PMI's [Make Reality hub], the virtual home of changemakers!

Be a Changemaker and a Change Leader

- Be a diligent, respectful, and caring steward
- Recognize, evaluate, and respond to system interactions
- Navigate complexity
- Create a collaborative project team environment
- Demonstrate leadership behaviors
- Optimize risk responses
- Effectively engage with stakeholders
- Tailor based on context
- Embrace adaptability and resiliency
- Focus on value
- Build quality into processes and deliverables
- Enable change to achieve the envisioned future state

How many of these project management principles are associated with the concept of change?



Monitor the External Business Environment

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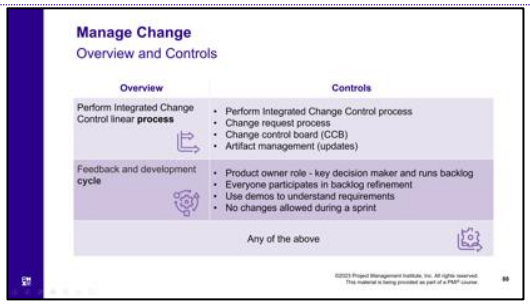
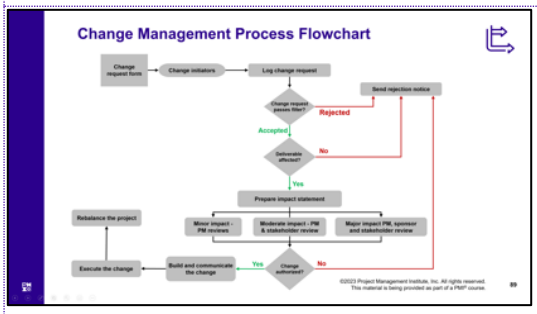


Manage Change: Overview and Controls

Notes on change controls across development approaches



Change Management Process Flowchart

Effective change control system includes:

- Forms
- Tracking methods - a change log updated at each step
- Processes
- Approval levels required for authorizing or rejecting requested changes

Every change request ends in one of two ways — either it is rejected, or the project is rebalanced. Explore the change management process pathways in the diagram.

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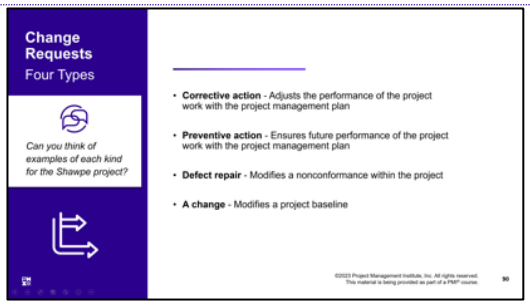

Change Requests: Four Types

-
- Corrective action

_____

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- Preventive action

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- Defect repair

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- A change

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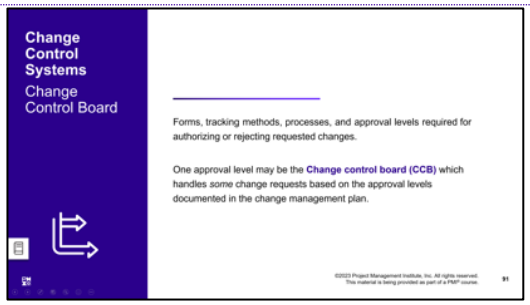
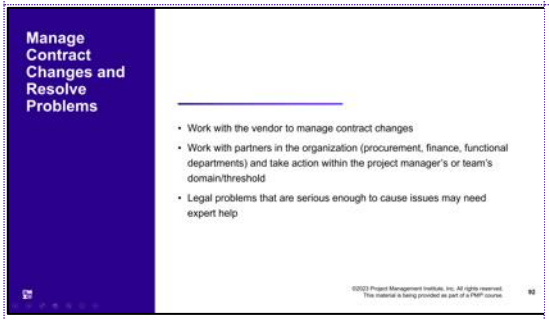
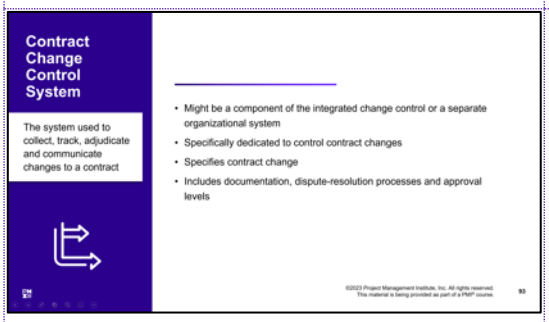


Change Control Systems: Change Control Board

Change control board



Manage Contract Changes and Resolve Problems



Contract Change Control System

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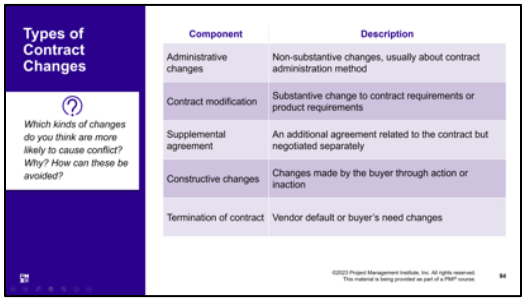
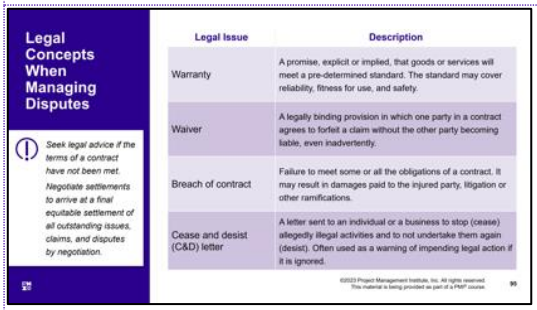


Which kinds of changes do you think are more likely to cause conflict? Why? How can these be avoided?

Types of Contract Changes

Component	
Administrative changes	
Contract modification	
Supplemental agreement	
Constructive changes	
Termination of contract	



Legal Concepts When Managing Disputes

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_____

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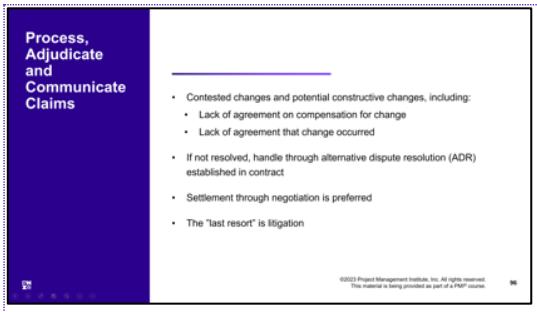

Process, Adjudicate, and Communicate Claims

_____

_____

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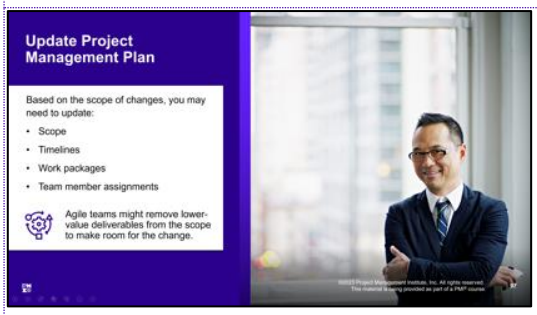
What kinds of changes do you think are more likely to cause conflict? Why? How can these be avoided?

_____

_____

_____



Update Project Management Plan

Describe the final steps in processing a change

_____

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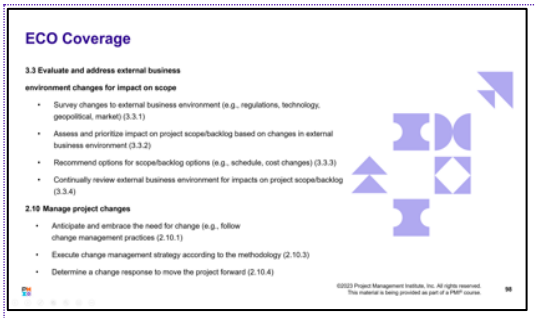

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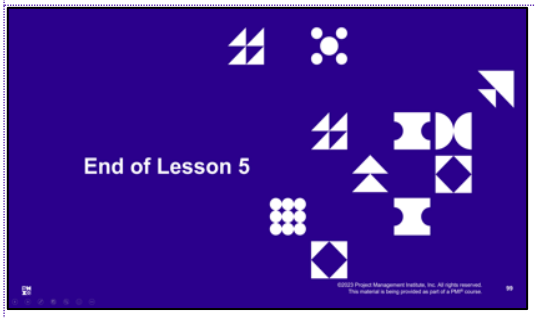

End of Lesson 5

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Lesson 6: Closing the Project/Phase

Description

Regardless of whether the project is completed successfully or cancelled prematurely, there are several activities that should be performed to close out the work.

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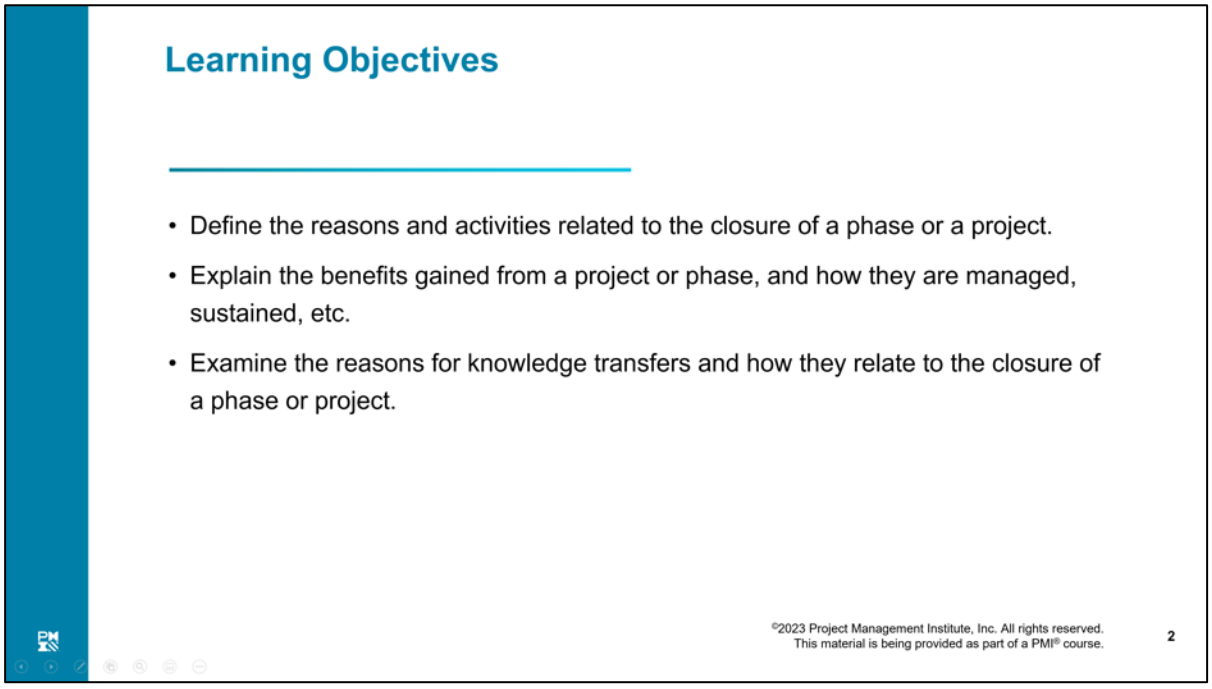

Topics

A. Project phase/closure
B. Benefits realization
C. Knowledge transfer

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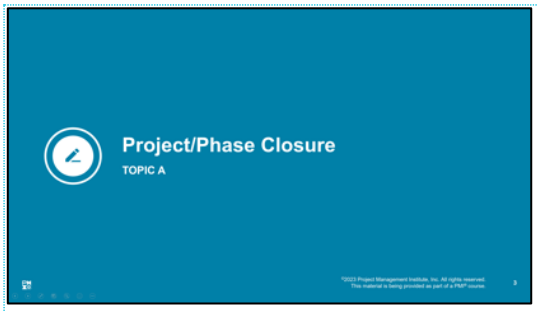
Lesson Notes

TOPIC 6A | PROJECT PHASE/CLOSURE

ECO Coverage

1.8 Negotiate project agreements
- Verify objective(s) of the project agreement is met (1.8.3)

2.17 Plan and manage project/phase closure or transitions
- Validate readiness for transition (e.g., operations team or next phase) (2.17.2)
- Conclude activities to close out project or phase (e.g., final lessons learned, retrospectives, procurement, financial, resources) (2.17.3)



Topic 6A: Project/Phase Closure

Whether it's closure of an entire project, or an individual phase, specific activities are required. Let's start with the various reasons for closure of a phase or a project before moving on to discussing appropriate activities for the closing process.

A predictive project uses a closeout process, while teams using adaptive approaches complete work and "release" the result to the customer and then continue to the next release.

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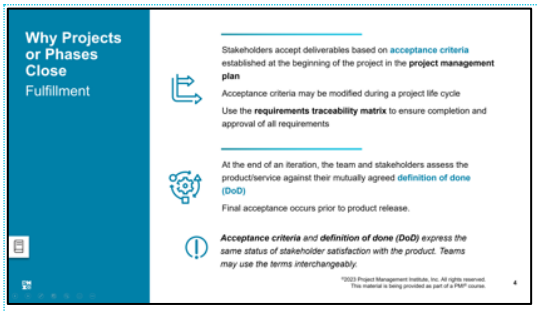


Why Phases or Projects Close: Fulfillment

Acceptance criteria

_____

_____

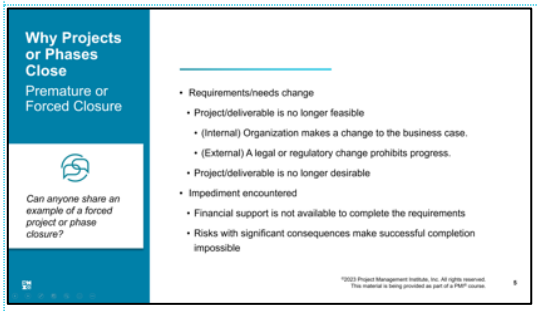
_____

Definition of Done (DOD)

_____

_____

_____



Why Phases or Projects Close: Premature or Forced Closure

_____

_____

_____

Can you think of examples?

_____

_____

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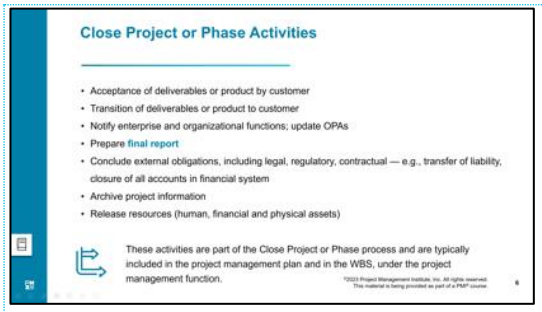

Close Project or Phase Activities

_____

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Final report

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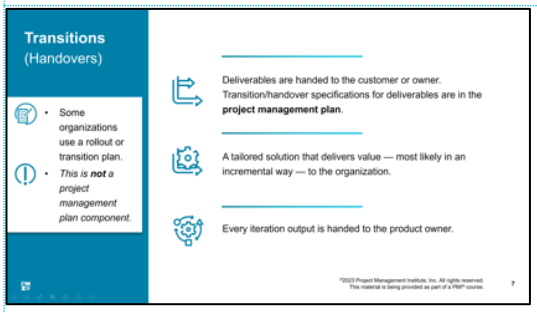

Transitions (Handovers)

_____

_____

_____

Do you use a rollout plan? What does it include?

_____

_____

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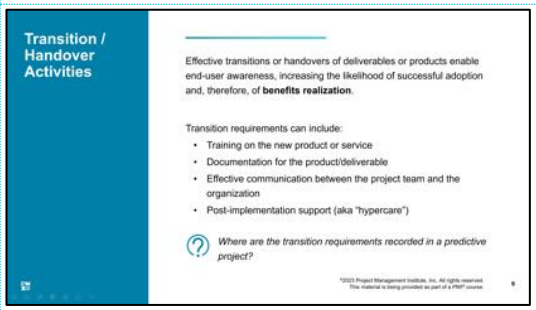
Transition/Handover Readiness

_____

_____

Assess the readiness of all parties, including:

- _____
- _____
- _____
- _____



Transition/Handover Activities

What activities are part of a transition/handover?

_____

_____

_____

_____

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Interactive/Activity

- Do you remember the difference between **explicit** and **tacit** knowledge?
- Discuss the importance of transferring both kinds of knowledge from the project team to the customer.
- Give an example of how your team has done it in the past.

_____

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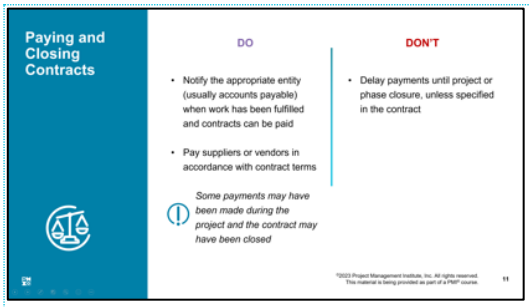

Paying and Closing Contracts

_____

_____

_____

DO:	DON'T:

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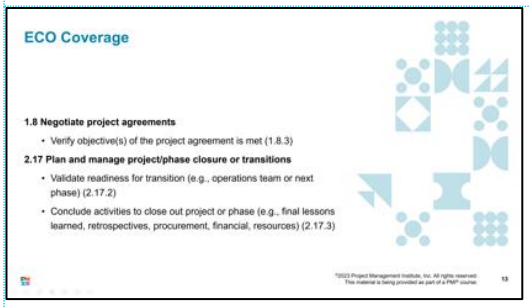
Finalizing Contracts



End of Topic 6A

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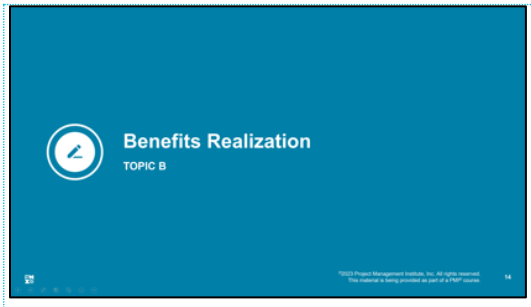
TOPIC 6B | BENEFITS REALIZATION

ECO Coverage

3.2 Evaluate and deliver project benefits and value

- Document agreement on ownership for ongoing benefit realization (3.2.2)
- Verify measurement system is in place to track benefits (3.2.3)



Topic 6B: Benefits Realization

Value is delivered when the customer organization can use, or realize, the requested benefits of a project.

This is an extremely important, yet typically ignored subject. When the project is transitioned or delivered to the business, the project team is no longer involved. Benefits realization, from the perspective of the project team, is about effective planning and a delivery or release schedule that satisfies the customer's requirements.

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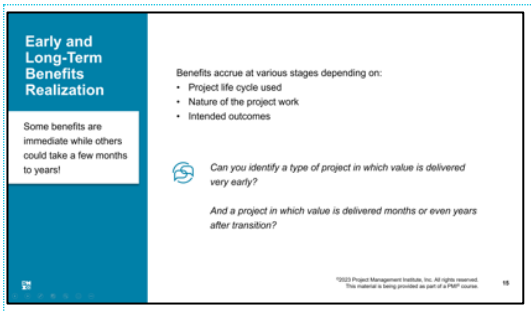

Early and Long-Term Benefits Realization

_____

_____

_____

Can you identify a type of project in which value is delivered very early?

_____

_____

_____

And a project in which value is delivered months or even years after transition?

_____

_____

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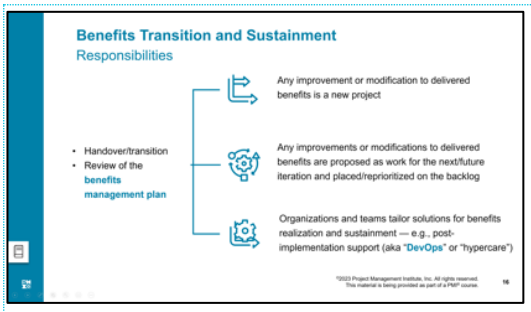

Benefits Transition and Sustainment: Responsibilities

Benefits management plan

_____

_____

_____

DevOps

_____

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_____

Additional notes:

_____

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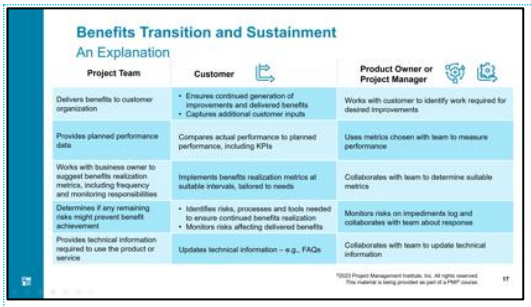

Benefits Transition and Sustainment: An Explanation

Spend some time exploring this chart that explains how project benefits can be measured and transitioned to the customer.

Project team	**Customer**	**Product owner or project manager**

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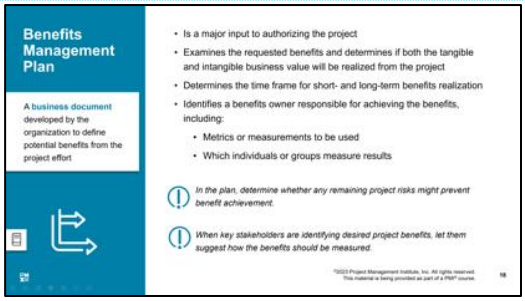

Benefits Management Plan

Define and describe the importance of the benefits management plan

_____

_____

Business document

_____

_____

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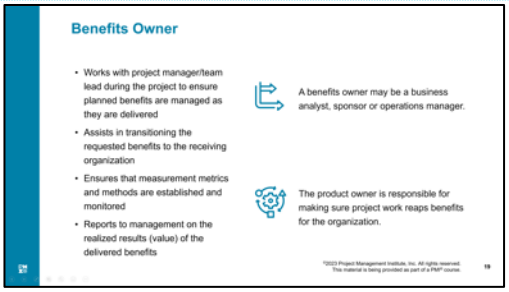

Benefits Owner

Who can be a benefits owner?

_____

_____

_____

What is the benefit owner's role and responsibility?

_____

_____

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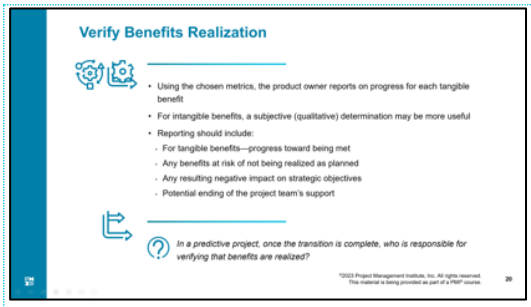
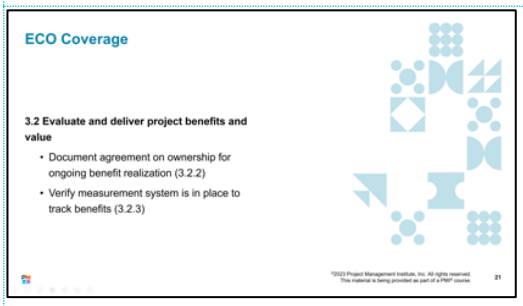


Verify Benefits Realization



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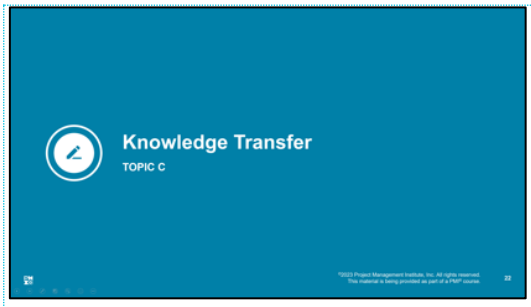
TOPIC 6C | KNOWLEDGE TRANSFER

ECO Coverage

2.16 Ensure knowledge transfer for project continuity
- Confirm approach for knowledge transfers (2.16.3)



Topic 6C: Knowledge Transfer

Knowledge transfer occurs between team members and stakeholders during the project, but it also becomes an asset to the organization and future projects as part of the historical project information.

This includes both the archiving of project artifacts per the OPAs as well as consolidating the individual lessons learned captured throughout the project into the organization's lessons learned repository.

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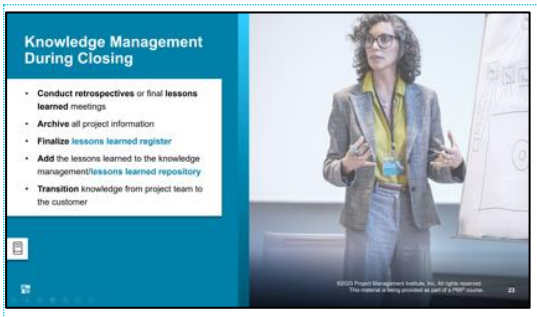
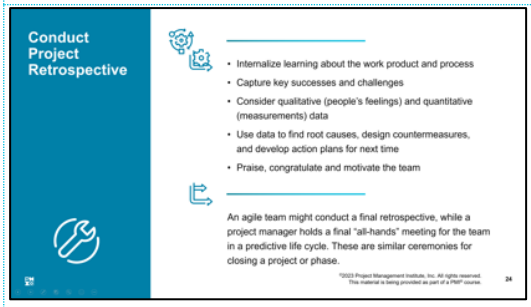


Knowledge Management During Closing

Lessons learned register

Lessons learned repository



Conduct Project Retrospective

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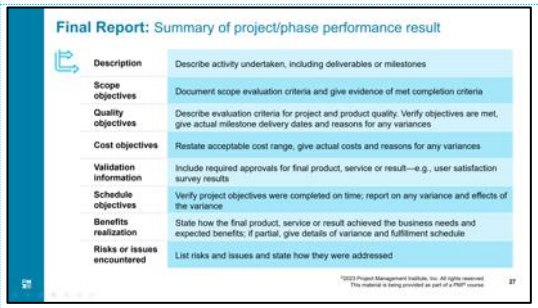
Finalize Lessons Learned

Consolidating Lessons Learned



Final Report: Summary of Project or Phase Performance Result

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Description	
Scope objectives	
Quality objectives	
Cost objectives	
Validation information	
Schedule objectives	
Benefits realization	
Risks or issues encountered	

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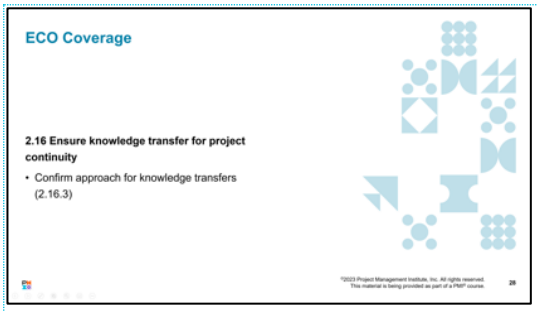

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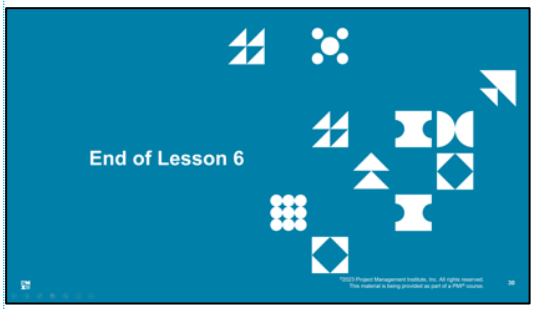

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